Devi, S.
10/749143

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FILE LAST UPDATED: 20 Sep 2006 (20060920/ED)

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- Key terms

L1 64938 SEA FILE=HCAPLUS ABB=ON PLU=ON ((NA OR SODIUM)(W)DODECYL OR SDS)(5W)(PAGE OR (POLYACRYL? OR POLY ACRYL?)(3W)ELECTROP HOR?)
L2 105556 SEA FILE=HCAPLUS ABB=ON PLU=ON GEL ELECTROPHOR?
L3 147559 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L2
L4 221 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND (MENINGOCOCC? OR MENINGITID?)
L5 130 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND (PROTEIN OR POLYPROTEIN OR POLYPEPTIDE OR PEPTIDE)
L6 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND (MW OR (M OR MOL OR MOLECUL?)(W)(W OR WT OR WEIGH?))
L7 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 AND (ISOL? OR RECOVER?)

L1 64938 SEA FILE=HCAPLUS ABB=ON PLU=ON ((NA OR SODIUM)(W)DODECYL OR SDS)(5W)(PAGE OR (POLYACRYL? OR POLY ACRYL?)(3W)ELECTROP HOR?)
L2 105556 SEA FILE=HCAPLUS ABB=ON PLU=ON GEL ELECTROPHOR?
L3 147559 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L2
L4 221 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND (MENINGOCOCC? OR MENINGITID?)
L5 130 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND (PROTEIN OR POLYPROTEIN OR POLYPEPTIDE OR PEPTIDE)
L8 18 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND (?KILOD? OR KD OR KDA? OR ?KDA OR ?KILO)

L1 64938 SEA FILE=HCAPLUS ABB=ON PLU=ON ((NA OR SODIUM)(W)DODECYL OR SDS)(5W)(PAGE OR (POLYACRYL? OR POLY ACRYL?)(3W)ELECTROP HOR?)
L2 105556 SEA FILE=HCAPLUS ABB=ON PLU=ON GEL ELECTROPHOR?
L3 147559 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L2
L4 221 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND (MENINGOCOCC? OR MENINGITID?)

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L5          130 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 AND (PROTEIN OR
                POLYPROTEIN OR POLYPEPTIDE OR PEPTIDE)
L9            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND (40KD? OR 41KD? OR
                42KD? OR 43KD? OR 44KD? OR 45KD? OR 46KD? OR 47KD? OR
                48KD? OR 49KD? OR 50KD? OR 51KD? OR 52KD? OR 53KD?)


L1        64938 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((NA OR SODIUM)(W)DODECYL
                OR SDS)(5W)(PAGE OR (POLYACRYL? OR POLY ACRYL?)(3W)ELECTROP
                HOR?)
L2       105556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GEL ELECTROPHOR?
L3       147559 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 OR L2
L4          221 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3 AND (MENINGOCOCC? OR
                MENINGITID?)
L5          130 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 AND (PROTEIN OR
                POLYPROTEIN OR POLYPEPTIDE OR PEPTIDE)
L10           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND (40KILOD? OR
                41KILOD? OR 42KILOD? OR 43KILOD? OR 44KILOD? OR 45KILOD?
                OR 46KILOD? OR 47KILOD? OR 48KILOD? OR 49KILOD? OR
                50KILOD? OR 51KILOD? OR 52KILOD? OR 53KILOD?)


L11          28 S L7 OR L8 OR L9

L11  ANSWER 1 OF 28  HCAPLUS  COPYRIGHT 2006 ACS on STN
ED   Entered STN:  06 Nov 2004
ACCESSION NUMBER:          2004:934468  HCAPLUS
DOCUMENT NUMBER:           141:394068
TITLE:                     Neisseria ORF2086 cross-reactive antigens, and
                           epitopes and antibodies thereof for the prevention
                           and treatment of meningococcal disease
INVENTOR(S):               Zlotnick, Gary W.; Fletcher, Leah D.; Farley,
                           John; Bernfield, Liesel A.; Zagursky, Robert J.;
                           Metcalf, Benjamin J.
PATENT ASSIGNEE(S):        Wyeth Holdings Corporation, USA
SOURCE:                    PCT Int. Appl., 160 pp.
                           CODEN: PIXXD2
DOCUMENT TYPE:             Patent
LANGUAGE:                  English
FAMILY ACC. NUM. COUNT:    1
PATENT INFORMATION:

     PATENT NO.            KIND   DATE        APPLICATION NO.          DATE
     ----------            ----   --------    -------------------      --------
     WO 2004094596          A2    20041104    WO 2004-US11901          20040416
     WO 2004094596          C1    20060615
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,
             CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
             GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,
             KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
             MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,
             SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
             VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,
             DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
             ML, MR, NE, SN, TD, TG
     AU 2004233012          A1    20041104    AU 2004-233012           20040416
```

CA 2522751	AA	20041104	CA 2004-2522751	20040416
EP 1618185	A2	20060125	EP 2004-759967	20040416
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004009459	A	20060502	BR 2004-9459	20040416
PRIORITY APPLN. INFO.:			US 2003-463161P	P 20030416
			WO 2004-US11901	W 20040416

AB The present invention relates to Neisseria antigen, 28-**kDa** lipoprotein called LP2086, that induces cross-reactive bactericidal antibodies against a number of Neisseria **meningitidis** strains. The Neisseria ORF2086 **proteins** can be isolated from neisserial strains, including N. **meningitidis**, N. gonorrhoeae, and N. lactamica, or prepared recombinantly, including immunogenic portions thereof and biol. equivalent thereof. The invention also relates to LP2086 antibodies and nucleic acid sequences encoding LP2086. Sequences of ORF2086 epitopes are provided. These antigens, antibodies and polynucleotides encoding them are useful for diagnosis, prevention and treatment of infection by Neisseria **meningitidis** serogroup B. The rLP2086 family of antigens are candidates for vaccine development.

L11 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 01 Dec 2003
ACCESSION NUMBER: 2003:933149 HCAPLUS
DOCUMENT NUMBER: 140:390041
TITLE: Preparation of monoclonal antibodies against major outer membrane **protein** of Neisseria gonorrhoeae
AUTHOR(S): Wang, Zhou; Zheng, Wei; Shen, Guanxin; Zhu, Huifen; Zhang, Yue; Xia, Zhengxi
CORPORATE SOURCE: Wuhan Institute of Dermatology and Venereology, Wuhan, 430030, Peop. Rep. China
SOURCE: Zhonghua Pifuke Zazhi (2003), 36(2), 91-93
CODEN: CHFTAJ; ISSN: 0412-4030
PUBLISHER: Zhongguo Yixue Kexueyuan Pifubing Yanjiuso
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB A rapid, sensitive and specific diagnostic test for detecting Neisseria gonorrhoeae was established. The major outer membrane **proteins** (PI) in different gonococcal serogroups were obtained by **isolation** of outer membrane complex with CTB-ethanol precipitation, extracted with Z3,14 and EDTA, and purified with DEAE-Sepharose CL-6B. Hybridoma cell lines producing McAbs against PI were established with lymphocyte hybridoma techniques. The **mol. weight** of PIA and PIB were determined with **SDS-PAGE** as 35.2 and 36.7 **kDa**, resp. Five hybridoma cell lines producing McAbs continuously and stably against PIA and PIB were obtained, including two against PIA and three against PIB. The titers of McAbs in culture supernatant and in abdominal ascites of BALB/c were from 1:64 to 1:256, and from 1:4096 to 1:16384, resp. The specificity of McAbs against PIA and PIB was so high that they easily reacted with N. gonorrhoeae, but did not with other antigens such as N. **meningitidis** etc. The purified PI and McAbs obtained in this study provide a basis to establish a rapid, sensitive and specific diagnostic test for detecting N. gonorrhoeae.

L11 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 08 Aug 2003
ACCESSION NUMBER: 2003:610180 HCAPLUS
DOCUMENT NUMBER: 139:163580
TITLE: Neisseria ORF2086 antigens and antibodies for prevention and treatment of **meningococcal** disease caused by Neisseria **meningitidis** serogroup B infection
INVENTOR(S): Zlotnick, Gary W.; Fletcher, Leah D.; Farley, John; Bernfield, Liesel A.; Zagursky, Robert J.; Metcalf, Benjamin J.
PATENT ASSIGNEE(S): Wyeth Holdings Corporation, USA
SOURCE: PCT Int. Appl., 480 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003063766	A2	20030807	WO 2002-US32369	20021011
WO 2003063766	A3	20040108		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2463476	AA	20030807	CA 2002-2463476	20021011
EP 1442047	A2	20040804	EP 2002-804818	20021011
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1578785	A	20050209	CN 2002-823330	20021011
JP 2005515771	T2	20050602	JP 2003-563462	20021011
BR 2002012999	A	20060523	BR 2002-12999	20021011
US 2004167068	A1	20040826	US 2003-652870	20030902
PRIORITY APPLN. INFO.:			US 2001-328101P P	20011011
			US 2002-406934P P	20020830
			WO 2002-US32369 W	20021011

AB The present invention relates to Neisseria ORF2086 **proteins**, crossreactive immunogenic **proteins** which can be **isolated** from Neisseria strains or prepared recombinantly, including immunogenic portions thereof, biol. equivalent thereof, and antibodies that immunospecifically bind to the foregoing and nucleic acid sequences encoding each of the foregoing. These antigens, antibodies and polynucleotides encoding them are useful for diagnosis, prevention and treatment of infection by Neisseria **meningitidis** serogroup B.

L11 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 04 Jun 2003
ACCESSION NUMBER: 2003:426633 HCAPLUS
DOCUMENT NUMBER: 139:33082

TITLE: Effect of heat shock response on acid and base tolerance of serogroup A Neisseria **meningitidis**
AUTHOR(S): Abdel-Salam, Hassan A.
CORPORATE SOURCE: Department of Microbiology, Faculty of Pharmacy, University of Zagazig, Zagazig, 44519, Egypt
SOURCE: Alexandria Journal of Pharmaceutical Sciences (2003), 17(1), 53-59
CODEN: AJPSES; ISSN: 1110-1792
PUBLISHER: University of Alexandria, Faculty of Pharmacy
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Neisseria **meningitidis** serogroup A strain, grown to stationary phase and heat-shocked with sublethal temperature at 42°C for 5 min., can survive several hours at lethal temperature (45°C), acidic pH (pH 3.5) and basic pH (pH 8.5). These are considerably different from the normal temperature, acid and base limits of growth. The heat-shocked cells showed 20% survival in both base and thermotolerant conditions and 30% survival in acid-tolerant condition. The untreated cells exhibited a low survival percentage of about 0.05%, 0.09% and 0.001% in acid, base and high temperature conditions, resp. Increased levels of hsp 70 **KDa protein** was observed in cells grown at 42°C for 5, 10 and 20 min. Different increased levels of 70 and 48 **KDa proteins** were detected in **gel electrophoresis** and western blot of cell extract and outer membrane **proteins** after cells were shocked at 42°C for 10 min., then synergistically stressed by either acidic or basic states. The heat-shocked cells of N. **meningitidis** were capable to survive in these drastic conditions for 6 h. The heat-unshocked cells showed rapid killing rate upon exposure to these drastic conditions. This could be considered a virulence factor that enhances capability of cells to invade blood stream. It may also be an alternative pathway of blood bacteremia caused by N. **meningitidis**, which is one of nasopharynx inhabitants.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 16 Apr 2002
ACCESSION NUMBER: 2002:281164 HCAPLUS
DOCUMENT NUMBER: 137:17550
TITLE: Antigenic analysis of Haemophilus influenzae based on biotypes and patterns of OMP P2
AUTHOR(S): Hwang, Kyu-Jam; Kim, Ki Sang; Lee, Yong Hee; Park, Kang Soo; Lee, Kwang Jun; Min, Kyung-Hee
CORPORATE SOURCE: National Institute of Health, Lab. of Respiratory Infections, Sookmyung Women's University, Yongsan-Ku, Seoul, S. Korea
SOURCE: Journal of Bacteriology and Virology (2001), 31(4), 299-306
CODEN: JBVOAH; ISSN: 1598-2467
PUBLISHER: Journal of Bacteriology and Virology
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB To understand major antigenic **protein** profile and to analyze outer membrane **protein** (OMP) P2 subtypes, 150 **isolates** including 14 Haemophilus influenzae serotype b (Hib) and, 136 of nontypeable H. influenzae (NTHI) strains were

characterized by biotyping, **SDS-PAGE**, and immunoblotting with monoclonal antibodies. In NTHI biotyping, biotype I and II were the most representative ones, which includes 45 **isolates** (27.6%) and 31 **isolates** (19.0%), resp. Hib strains were classified into biotype I, II, V, VI, and VIII. Any correlation could not be confirmed among the biotypes and the sources of specimen. Based on the **SDS-PAGE** patterns of OMP P2 **protein**, ranging from **MW** 32 **KDa** to 42 **KDa**, NTHI strains were classified into 8 subtypes. All of the serotype b strains showed identical pattern with the 38 **KDa**, except J18 which showed 36 **KDa**, OMP P2 **protein** profile. In **SDS-PAGE**, Hib OMP P2 showed distinctive difference from NTHI strains. Two monoclonal antibodies, 3F8 and 5E5, specific to the **protein** P2 were used to type the strains. Mab 5E5, which showed Haemophilus genus specificity, reacted with H. parainfluenzae 7901 and biotype aegyptius 11116, but not with N. **meningitidis**, S. pneumoniae, or E. coli. It was confirmed that the Mab 3F8 and 5E5 were directed against the surface exposed OMP epitope of immunized strain by immunogold electron microscopy. In conclusion, OMP P2 was a major antigenic **protein**, and was supposed to play an important role in antigen detection and to be used for the mol. epidemiol. study of H. influenzae **isolates.**

L11 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 05 Sep 2001
ACCESSION NUMBER: 2001:647727 HCAPLUS
DOCUMENT NUMBER: 135:329136
TITLE: Unusual antineisserial activity expressed by a systemic isolate of Neisseria **meningitidis**. Antimeningococcal effect and properties
AUTHOR(S): Allunans, Juris; Bovre, Kjell
CORPORATE SOURCE: Department of Molecular Biology, Institute of Medical Microbiology, University of Oslo, Oslo, NO-0027, Norway
SOURCE: Scandinavian Journal of Infectious Diseases (2001), 33(7), 516-522
CODEN: SJIDB7; ISSN: 0036-5548
PUBLISHER: Taylor & Francis Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Antineisserial activity expressed by the systemic Neisseria **meningitidis** strain 77/79A was studied using the cross-streaking technique. Of 271 **meningococcal** isolates tested, >84% were sensitive to this strain. The degree of susceptibility was largely dependent upon the agent characteristics of the individual isolates. Serogroup A sulfonamide-resistant systemic strains and non-groupable sulfonamide-sensitive isolates from healthy carriers were highly sensitive to the antagonistic activity. Among insensitive or weakly sensitive strains, serogroup B sulfonamide-resistant isolates dominated. The activity is of general interest as it also antagonized growth of bacteriocin producers. Colonization by the producer strain might determine the agent characteristics of a surviving population. Group B was predominant among disease-causing strains in Norway at the time when strain 77/79A was isolated. A component was purified by ammonium sulfate precipitation, gel filtration and hydrophobic interaction chromatog. It was bacteriostatic and partly resistant to proteolysis by trypsin. Prepns. remained active after 30 min at 90°C, but activity was lost after 20 min at 120°C. Nevertheless, **sodium**

dodecyl sulfate-**polyacrylamide gel electrophoresis** produced a band by Coomassie Brilliant Blue staining, corresponding to a mol. mass of ≈52 **kDa.** Further characterization was limited due to the low levels of active substance produced.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 30 Aug 2001
ACCESSION NUMBER: 2001:630024 HCAPLUS
DOCUMENT NUMBER: 136:227629
TITLE: gmhX, a novel gene required for the incorporation of L-glycero-D-manno-heptose into lipooligosaccharide in Neisseria **meningitidis**
AUTHOR(S): Shih, Giles C.; Kahler, Charlene M.; Carlson, Russell W.; Rahman, M. Mahbubur; Stephens, David S.
CORPORATE SOURCE: Department of Medicine, Emory University School of Medicine, Atlanta, GA, 30322, USA
SOURCE: Microbiology (Reading, United Kingdom) (2001), 147(8), 2367-2377
CODEN: MROBEO; ISSN: 1350-0872
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Lipooligosaccharide (LOS) is a critical virulence factor of Neisseria **meningitidis.** A Tn916 insertion mutant, designated 469, was found to exhibit a markedly truncated LOS of 2.9 **kDa** when compared by Tricine/**SDS-PAGE** to the parental LOS (4.6 **kDa**). Electrospray mass spectrometry anal. of 469 LOS revealed that it consisted of the deep rough, heptose-deficient structure, Kdo2-lipid A. Sequencing of chromosomal DNA flanking the Tn916 insertion in mutant 469 revealed that the transposon had inserted into an ORF predicted to encode a 187 aa **protein** with sequence homol. to the histidinol-phosphate phosphatase domain of Escherichia coli HisB and to a family of genes of unknown function. The gene, designated gmhX, is part of a polycistronic operon (ice-2) containing two other genes, nlaB and orfC. NlaB encodes a lysophosphatidic-acid acyltransferase and orfC is predicted to encode a N-acetyltransferase. Specific polar and non-polar gmhX mutations in the parental strain, NMB, exhibited the truncated LOS structure of mutant 469, and repair of gmhX mutants by homologous recombination with the wild-type gmhX restored the LOS parental phenotype. GmhX mutants demonstrated increased sensitivity to polymyxin B. GmhX mutants and other Kdo2-lipid A mutants also demonstrated increased sensitivity to killing by normal human serum but were not as sensitive as inner-core mutants containing heptose. In the genomes of Helicobacter pylori and Synechocystis, gmhX homologs are associated with heptose biosynthesis genes; however, in N. **meningitidis**, gmhX was found in a location distinct from that of gmhA, rfaD, rfaE, aut and rfaC. GmhX is a novel enzyme required for the incorporation of L-glycero-D-manno-heptose into **meningococcal** LOS, and is a candidate for the 2-D-glycero-manno-heptose phosphatase of the heptose biosynthesis pathway.

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 25 Jul 2001
ACCESSION NUMBER: 2001:535219 HCAPLUS
DOCUMENT NUMBER: 135:268939
TITLE: Expression, refolding and crystallization of the OpcA invasin from Neisseria **meningitidis**
AUTHOR(S): Prince, S. M.; Feron, C.; Janssens, D.; Lobet, Y.; Achtman, M.; Kusecek, B.; Bullough, P. A.; Derrick, J. P.
CORPORATE SOURCE: Department of Biomolecular Sciences, UMIST, Manchester, UK
SOURCE: Acta Crystallographica, Section D: Biological Crystallography (2001), D57(8), 1164-1166
CODEN: ABCRE6; ISSN: 0907-4449
PUBLISHER: Munksgaard International Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB OpcA is an integral outer membrane from the Gram-neg. pathogen Neisseria **meningitidis** that plays a role in adhesion of **meningococci** to host cells. The **protein** was overexpressed in Escherichia coli in an insol. form and a procedure developed for refolding by rapid dilution from denaturant into detergent solution The refolded material was identical to native OpcA **isolated** from **meningococci**, as judged by overall **mol. weight**, migration on **SDS-PAGE** and reaction against monoclonal antibodies. Both native and recombinant OpcA crystallized under similar conditions to give an orthorhombic crystal form (P21212), with unit-cell parameters a = 96.9, b = 46.3, c = 74.0 Å. Complete data sets of reflections were collected from native and refolded OpcA to 2.0 Å resolution
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 11 May 1999
ACCESSION NUMBER: 1999:288812 HCAPLUS
DOCUMENT NUMBER: 131:86636
TITLE: Proteosome delivery of a protective 9B-antigen against Schistosoma mansoni
AUTHOR(S): Tarrab-Hazdai, R.; Schechtman, D.; Lowell, G.; Pirak, E.; Arnon, R.
CORPORATE SOURCE: Department of Immunology, The Weizmann Institute of Science, Rehovot, 76100, Israel
SOURCE: International Journal of Immunopharmacology (1999), 21(3), 205-218
CODEN: IJIMDS; ISSN: 0192-0561
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors have previously characterized a stage specific, partially protective **protein** denoted 9B-antigen. This antigen is 450 **kDa** in its native form but upon **SDS-PAGE** in reducing conditions it exhibits 2 subunits of 30 **kDa** and 45 **kDa.** The 9B-antigen is localized at the surface of schistosomula and persists at the surface of lung schistosomula. The 9B-antigen is also localized in internal organs of a vital function in the parasite such as flame cells and cytoplasmic tubes. Infected individuals or mice vaccinated with irradiated cercariae recognize the

9B-antigen. The authors have previously shown that when injected with complete Freunds adjuvant, the 9B-antigen can induce 40% protection against challenge infection. Here, they used a more effective delivery system for this antigen. The 9B-antigen was coupled to proteosomes derived from **meningococcal** outer membrane **proteins.** Vaccination of mice with this complex increased the protection level to 60%. Sera from these vaccinated mice induced high levels of complement-mediated cytotoxicity. Since the proteosomes are approved for human use, these results are promising towards the development of a vaccine against schistosomiasis.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 03 Mar 1999
ACCESSION NUMBER: 1999:136655 HCAPLUS
DOCUMENT NUMBER: 130:335065
TITLE: Production, isolation and purification of bacteriocins expressed by two strains of Neisseria **meningitidis**
AUTHOR(S): Allunans, Juris; Bjoras, Magnar; Seeberg, Erling; Bovre, Kjell
CORPORATE SOURCE: Kaptein W. Wilhelmsen og Frues Institute of Medical Microbiology, University of Oslo, Oslo, Norway
SOURCE: APMIS (1998), 106(12), 1181-1187
CODEN: APMSEL; ISSN: 0903-4641
PUBLISHER: Munksgaard International Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The systemic Neisseria **meningitidis** strain P241 and the healthy pharyngeal carrier strain BT878 produce bacteriocin-like substances during growth. A method has been devised for obtaining the active substances in solution The activity was recovered by freeze-thaw extraction of dialyzed Todd-Hewitt agar medium into which the bacteriocins had diffused during growth of the producer strains. The bacteriocins were purified more than 50-fold by ammonium-sulfate precipitation and hydrophobic interaction chromatog. They are quite stable to heat and remain active 100% after 30 min at 100°C. However, the **protein** nature of the bacteriocins has been confirmed by their sensitivity to α-chymotrypsin. Gel filtration indicated an Mr of 100-110 **kDa**, whereas **SDS-polyacrylamide gel electrophoresis** produced a common band by Coomassie staining corresponding to an Mr of 47-48 **kDa**; suggesting a dimer form of the active **protein** component.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 18 Aug 1998
ACCESSION NUMBER: 1998:511567 HCAPLUS
DOCUMENT NUMBER: 129:272531
TITLE: Single-step purification of class 5 outer membrane **protein** from Neisseria **meningitidis** using preparative electrophoresis
AUTHOR(S): De Simone, S. Giovanni; Souza, A. L. A.; Batoreu, N. M.

CORPORATE SOURCE: Laboratorio de Microsequenciamento de Proteins, Departmento de Bioquimica e Biologia Molecular, Instituto Oswaldo Cruz, FIOCRUZ, Universidade Federal Fluminense, Rio de Janeiro, 21040-900, Brazil
SOURCE: Biomedical Letters (1998), 57(225), 7-13
CODEN: BILEE4; ISSN: 0961-088X
PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A 30 **kD protein** was isolated from an outer membrane vesicle (OMV) preparation of Neisseria **meningitidis** using single-step preparative electrophoresis. From a total of 23.4 mg of OMV-applied on **SDS-PAGE**, 3.9 mg of 30 **kD protein** were recovered in the single step of fractionation. This corresponds to 17% of the total **protein** applied. The **protein** was homogeneous by **SDS-PAGE** and N-terminal (ASLGsRSPYYVQAD) amino acid sequence anal. Monoclonal antibodies to the 30 **kD protein** were raised in mice, confirming its purity and specificity. Sera from N. **meningitidis** patients reacted with the 30 **kD protein**, but this did not occur with normal healthy individuals. Thus the method used allowed the purification of the antigen in a high yield, suggesting that it can be used as an alternative approach for the purification of other very hydrophobic **proteins.**
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 28 May 1998
ACCESSION NUMBER: 1998:309733 HCAPLUS
DOCUMENT NUMBER: 129:78917
TITLE: Analysis of OMP antigenicity of serogroup B **meningococci**
AUTHOR(S): Gao, Lihui; Hu, Xujing; Xu, Li
CORPORATE SOURCE: Institute of Epidemiology and Microbiology, Chinese Academy of Preventive Medicine, Beijing, 102206, Peop. Rep. China
SOURCE: Zhonghua Weishengwuxue He Mianyixue Zazhi (1997), 17(6), 416-420
CODEN: ZWMZDP; ISSN: 0254-5101
PUBLISHER: Weishenbu Beijing Shengwu Zhipin Yanjiuso
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB Ten representative strains of serogroup B **meningococci** **isolated** from patients and carriers in China since the 1970s were selected based on the phenotypes and genotypes. The outer membrane **proteins** (OMPs) of above 10 strains were extracted, and their **SDS-PAGE** profiles were found different, but each of them possessed the bands of class 1, 2/3, 4 and 5 OMPs with **MW** 28kD-43kD. Class 1 outer membrane **protein** (OMP1) was further purified from the 10 strains and each of them only showed one band with **MW** 41 or **43kD** by **SDS-PAGE.** Mice were immunized with 5Φmg, 15Φmg and 25Φmg of the OMP1 purified from the two more representative strains 542852 (B:NT: P1.2:L3, 7, 9:Clone I:RELP-b20) and 3407 (B:15:P1.2:L3, 7, 9:Clone I:RFLP-b20) resp. The titers of antibody elicited by OMP1 were determined by ELISA and bactericidal test. The subclasses of IgG against OMP1 were also examined by immunodiffusion

test. The highest titers of IgG were induced by 25Φmg of OMP1 and the titer of IgG evoked by OMP1 of strain 542852 was obviously higher than that of 3407. The specific antibody induced by OMP1 of the strain 542852 contained IgG1, IgG2a and IgG3, and had detectable bactericidal activity against serogroup B **meningococci** with same subtype. The reactions of above OMP1 with their antisera indicated by Western blotting were specific.

L11 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 26 Sep 1997
ACCESSION NUMBER: 1997:613338 HCAPLUS
DOCUMENT NUMBER: 127:290319
TITLE: Membrane cofactor **protein** (MCP or CD46) is a cellular pilus receptor for pathogenic Neisseria
AUTHOR(S): Kallstrom, Helena; Liszewski, M. Kathryn; Atkinson, John P.; Jonsson, Ann-Beth
CORPORATE SOURCE: Microbiology and Tumorbiology Center, Karolinska Institute, Stockholm, S-171 77, Swed.
SOURCE: Molecular Microbiology (1997), 25(4), 639-647
CODEN: MOMIEE; ISSN: 0950-382X
PUBLISHER: Blackwell
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pili of Neisseria gonorrhoeae and Neisseria **meningitidis** mediate binding of the bacteria to human cell-surface receptors. The authors found that purified pili bound to a 55-60-**kDa** doublet band on **SDS-PAGE** of separated human epithelial cell exts. This is a migration pattern typical of membrane cofactor **protein** (MCP or CD46). MCP is a widely distributed human complement regulatory **protein.** Attachment of the bacteria to epithelial cells was blocked by polyclonal and monoclonal antibodies directed to MCP, suggesting that this complement regulator is a receptor for piliated Neisseria. The authors proved this hypothesis by demonstrating that piliated, but not non-piliated, gonococci bound to CHO cells transfected with human MCP-cDNA. They also demonstrated a direct interaction between purified recombinant MCP and piliated Neisseria. Finally, recombinant MCP **protein** produced in E. coli inhibited attachment of the bacteria to target cells. Thus, MCP is a human cell-surface receptor for piliated pathogenic Neisseria.
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 24 Sep 1997
ACCESSION NUMBER: 1997:603190 HCAPLUS
DOCUMENT NUMBER: 127:189653
TITLE: Lactoferrin receptor **protein**
INVENTOR(S): Schryvers, Anthony B.; Bonnah, Robert A.
PATENT ASSIGNEE(S): Connaught Laboratories Limited, Can.
SOURCE: Can. Pat. Appl., 50 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

CA 2162193	AA	19970503	CA 1995-2162193	19951106
US 6048539	A	20000411	US 1995-552232	19951102
US 6211343	B1	20010403	US 1999-370869	19990810
US 6344200	B1	20020205	US 1999-371126	19990810
US 6348198	B1	20020219	US 1999-371127	19990810
PRIORITY APPLN. INFO.:			US 1995-552232 A	19951102

AB An **isolated** and purified lactoferrin receptor **protein** is **isolated** and purified from bacterial pathogens, including Moraxella and Neisseria, and has a **mol. weight** of between about 70,000 and about 90,000, as determined by **SDS-PAGE.** Such lactoferrin receptor **protein** may be provided in combination with a lactoferrin receptor **protein** from the bacterial pathogen of a **mol. weight** of about 100,000 to about 105,000 daltons. The lactoferrin receptor **protein** may be produced by providing a solubilized membrane preparation from the bacterial pathogen containing lactoferrin receptor **proteins**, non-lactoferrin receptor **proteins** and other contaminants, complexing the lactoferrin receptor **proteins** with lactoferrin and purifying the resulting complexes substantially free from the non-lactoferrin receptor **proteins** and the other contaminants, and separating the novel lactoferrin receptor **protein** from the complexes. The lactoferrin receptor **protein** is useful in diagnostic applications and immunogenic compns., particularly for in vivo administration to a host to confer protection against disease caused by a bacterial pathogen that produces the lactoferrin receptor **protein** or produces a **protein** capable of inducing antibodies in a host specifically reactive with the lactoferrin receptor **protein.**

L11 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 11 Jan 1996
ACCESSION NUMBER: 1996:23685 HCAPLUS
DOCUMENT NUMBER: 124:81754
TITLE: Expression of iron-regulated outer membrane **protein** in Neisseria **meningitidis** : A comparison of three culture media
AUTHOR(S): Jessouroun, Ellen; Danelli, Maria das Gracas Miranda; Almeida, Andre Luiz de
CORPORATE SOURCE: Instituto de Technologia em Imunobiologicos (Bio-Manguinhos), Rio de Janeiro, Brazil
SOURCE: Biomedical Letters (1995), 51(202), 85-92
CODEN: BILEE4; ISSN: 0961-088X
PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **SDS-PAGE** followed by Coomassie blue staining was used to analyze the iron-regulated **protein** (IRP) expressed on the outer membrane of two strains of Neisseria **meningitidis** B:4:P1.15 (N44/89 and CU385). The organisms were cultured on three different media (TSB, Catlin and Franz) with and without iron-chelator. Under iron-starvation conditions the **meningococci** expressed new **proteins** on their outer membrane, including **proteins** of 60-90 **kD** and a 37 **kD protein.** In Catlin and TSB media, there was no difference between the expressed **proteins** for the two strains. On the other hand, the **protein** profile was unchanged when the strains were cultured in Franz medium with and

without EDDHA, with exception of a 55 **kD protein** induced by the N44/89 only in Franz with EDDHA. In addition, the **protein** profiles were different when compared with Catlin and TSB media. The IRP expressed by **meningococci** belonging to the same serotype and subtype varied qual. and quant. and the induction of these **proteins** depended on the medium formulation used.

L11 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 09 Jul 1994
ACCESSION NUMBER: 1994:404768 HCAPLUS
DOCUMENT NUMBER: 121:4768
TITLE: Lipooligosaccharide biosynthesis in pathogenic Neisseria. Cloning, identification, and characterization of the phosphoglucomutase gene
AUTHOR(S): Zhou, Daoguo; Stephens, David S.; Gibson, Bradford W.; Engstrom, Jeffrey J.; McAllister, Carl F.; Lee, Frank K. N.; Apicella, Michael A.
CORPORATE SOURCE: Dep. Microbiol., Univ. Iowa, Iowa City, IA, 52242, USA
SOURCE: Journal of Biological Chemistry (1994), 269(15), 11162-9
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The lipooligosaccharide (LOS) of pathogenic Neisseria is an important factor in disease pathogenesis. Little is known about the genes involved in neisserial LOS biosynthesis. To elucidate specific LOS biosynthetic genes, the authors screened a Tn916 library that was constructed in Neisseria **meningitidis** strain NMB. This strain expresses a single LOS that has an mol. mass of 4.5 **kDa** and binds monoclonal antibody (mAb) 3F11. This library was screened using a mAb panel that recognizes structural differences in neisserial LOS oligosaccharides. A stable LOS mutant of strain NMB was identified which the authors designated NMB-R6. This mutant expressed an LOS with an mol. mass of approx. 3.1-3.2 **kDa** and did not bind mAb 3F11. Genomic DNA from this mutant transformed N. **meningitidis** strain NMB to the tetracycline resistant NMB-R6 phenotype greater than 10-4/recipient/μg of DNA. In addition, the authors transformed Neisseria gonorrhoeae strain 1291 (LOS phenotype mol. mass 4.5 **kDa**, mAb 3F11+) to the NMB-R6 LOS phenotype with N. **meningitidis** NMB-R6 genomic DNA. Anal. of N. gonorrhoeae strain 1291-R6 LOS by mass spectroscopy showed that the LOS oligosaccharide structure is GlcNAc → Hep2phosphoethanolamine → 2-keto-3-deoxymannooctulosonic acid (where Hep is heptose). Sequence anal. showed that the transposon is inserted into the 3' end of a gene that has homol. to the human phosphoglucomutase (PGM) gene. Sequence comparison indicated that the putative PGM gene in N. gonorrhoeae 1291 and N. **meningitidis** NMB had 92% identity at the DNA level. PGM and glucokinase activity was present in cell free exts. of N. **meningitidis** NMB and N. gonorrhoeae strain 1291. N. **meningitidis** NMB-R6 and N. gonorrhoeae strain 1291-R6 had no detectable PGM activity, whereas glucokinase activity was similar to the wild type strains. PGM activity can be reconstituted in N. **meningitidis** strain NMB-R6 by transformation with the cloned PGM gene. **SDS-polyacrylamide gel electrophoresis** demonstrated that NMB-R6 transformed with the PGM gene expressed the 3F11+, 4.5-**kDa** LOS of the parent NMB strain. The inability of N. **meningitidis** NMB-R6 and N. gonorrhoeae strain 1291-R6

to convert glucose 6-phosphate to glucose 1-phosphate results in the truncated LOS phenotype expressed by these mutants.

L11 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 16 Oct 1993
ACCESSION NUMBER: 1993:555703 HCAPLUS
DOCUMENT NUMBER: 119:155703
TITLE: Phospholipid substitution of capsular polysaccharides and mechanisms of capsule formation in Neisseria **meningitidis**
AUTHOR(S): Frosch, Matthias; Mueller, Astrid
CORPORATE SOURCE: Inst. Med. Mikrobiol., Med. Hochsch. Hannover, Hannover, 3000/61, Germany
SOURCE: Molecular Microbiology (1993), 8(3), 483-93
CODEN: MOMIEE; ISSN: 0950-382X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Within the capsule gene complex (cps) of Neisseria **meningitidis** two functional regions B and C are involved in surface translocation of the cytoplasmically synthesized capsular polysaccharide, which is a homopolymer of α-2,8-polyneuraminic acid. The region-C gene products share characteristics with transporter **proteins** of the ABC (ATP-binding cassette) superfamily of active transporters. For anal. of the role of region B in surface translocation of the capsular polysaccharide the authors purified the polysaccharides of region B- and region C-defective Escherichia coli clones by affinity chromatog. The mol. wts. of the polysaccharides were determined by gel filtration and the polysaccharides were analyzed for phospholipid substitution by polyacrylamide **gel electrophoresis** and immunoblotting. The results indicate that the full-size capsular polysaccharide with a phospholipid anchor is synthesized intracellularly and that lipid modification is a strong requirement for translocation of the polysaccharide to the cell surface. **Proteins** encoded by region B are involved in phospholipid substitution of the capsular polysaccharide. Nucleotide sequence anal. of region B revealed two open reading frames, which encode **proteins** with mol. masses of 45.1 and 48.7 **kDa.**

L11 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 03 Apr 1992
ACCESSION NUMBER: 1992:124511 HCAPLUS
DOCUMENT NUMBER: 116:124511
TITLE: Influence of the nature of strains on the character of the production of iron-regulated **proteins** by **meningococci**
AUTHOR(S): Gorbacheva, B. O.; Filatova, T. N.; Petrov, A. B.
CORPORATE SOURCE: NII Vaktsin Syvorotok im. Mechnikova, Moscow, USSR
SOURCE: Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (1991), (11), 14-17
CODEN: ZMEIAV; ISSN: 0372-9311
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Three Neisseria **meningitidis** strains (15, 125, 2394) were compared by **SDS-PAGE** and immunoblotting. The high expression of 8 Fe-regulated **proteins** (IRP) occurred in Fe-deficient media. The major IRP, with a mol. weight of 35 **kD**, was expressed by all 3 N. **meningitidis** strains in Fe deficiency and cross-reacted with 10 mouse and rabbit antisera to N. **meningitidis** of different groups, i.e. it was common to all

Neisseria spp. The antigenic activity of various IRP essentially differed with respect to antisera of animals and sera of patients with **meningococcal** infection.

L11 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 27 Dec 1991
ACCESSION NUMBER: 1991:675359 HCAPLUS
DOCUMENT NUMBER: 115:275359
TITLE: Analysis of the molecular mass heterogeneity of the transferrin receptor in Neisseria **meningitidis** and commensal Neisseria
AUTHOR(S): Ferreiros, C. M.; Criado, M. T.; Pintor, M.; Ferron, L.
CORPORATE SOURCE: Fac. Farm., Univ. Santiago de Compostela, Santiago de Compostela, 15706, Spain
SOURCE: FEMS Microbiology Letters (1991), 83(3), 247-53
CODEN: FMLED7; ISSN: 0378-1097
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Peroxidase-conjugated transferrin was used to detect transferrin receptors both in intact outer membrane vesicles (OMVs) from Neisseria spp. in a dot blot assay, and in **SDS-PAGE**-separated OMV **proteins** after transferring to nitrocellulose membranes. All N. **meningitidis** strains produced transferrin receptors after culturing in either iron sufficiency or iron restriction although expression was higher in the latter case, whereas only six N. lactamica and two N. sicca (among 20 commensal species) were able to bind transferrin. Mol. mass (MM) of the receptors were mainly between 78 **kDa** and 85 **kDa** (87.5% of strains), 12.5% had receptors with MM close to 70 **kDa**, and 5% showed receptors with MM over 85 **kDa**. These results confirm the mol. mass heterogeneity of the transferrin receptors in N. **meningitidis**, completely disagree with the universal 98 **kDa** receptor proposed by some authors, and show a low expression of the receptor in commensal Neisseria.

L11 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 09 Mar 1991
ACCESSION NUMBER: 1991:79710 HCAPLUS
DOCUMENT NUMBER: 114:79710
TITLE: Immunogenicity and cross-reactivity of the 70-**Kda** iron-regulated **protein** of Neisseria **meningitidis** in man and animals
AUTHOR(S): Ala'aldeen, D. A.; Wall, R. A.; Borriello, S. P.
CORPORATE SOURCE: Microbial Pathogenicity Res. Group, MRC Clin. Res. Cent., Harrow/Middlesex, HA1 3UJ, UK
SOURCE: Journal of Medical Microbiology (1990), 32(4), 275-81
CODEN: JMMIAV; ISSN: 0022-2615
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The immune response to different serogroups and serotypes of N. **meningitidis** was examined in acute and convalescent sera from patients with **meningococcal** diseases. The focus of the study was the 70-**Kda** Fe-regulated outer-membrane **protein** (FeRP-70). FeRP-70 was demonstrated on all strains of different serogroups and serotypes examined by **SDS-PAGE** or Western blots of outer-membrane **proteins** (OMPs). Immunoblotting expts. demonstrated the presence of

considerable amts. of anti-FeRP-70 IgG antibodies in the acute and convalescent sera of patients; the antibodies reacted with homologous and heterologous strains. However, sera from 2 patients who died of severe **meningococcal** septicemia had no antibodies against FeRP-70 or any other OMPs demonstrable by immunoblotting. Absorbed rabbit hyperimmune sera reacted with FeRP-70 of their homologous strains, but, unlike human sera, with only a few of the heterologous strains. Thus, FeRP-70 is strongly immunogenic in vivo, cross-reactive amongst different strains, and man and animals differ considerably in their response to similar **meningococcal** antigens.

L11 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 27 Oct 1990
ACCESSION NUMBER: 1990:546610 HCAPLUS
DOCUMENT NUMBER: 113:146610
TITLE: Stable expression of **meningococcal** class 1 **protein** in an antigenically reactive form in outer membranes of Escherichia coli
AUTHOR(S): White, D. A.; Barlow, A. K.; Clarke, I. N.; Heckels, J. E.
CORPORATE SOURCE: Med. Sch., Univ. Southampton, Southampton, SO9 4XT, UK
SOURCE: Molecular Microbiology (1990), 4(5), 769-76
CODEN: MOMIEE; ISSN: 0950-382X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The entire gene encoding the class 1 outer membrane **protein** of Neisseria **meningitidis** is located on a 2.2 kb fragment obtained on digestion of chromosomal DNA with XbaI. This XabaI fragment from strain MC50 (subtype P1-16), which had previously been cloned in bacteriophage M13, was transferred to the plasmid vector pMTL20. The resulting plasmid (pPORA100) was propagated in E. coli (JM109) and cell lysates were subjected to **SDS-PAGE**. Western blotting with anti-class I **protein** antibodies revealed constitutive expression of a **protein** of 41 **kD**, corresponding to the class 1 **protein** of the parent **meningococcal** strain, which was absent in the E. coli control. Fractionation of E. coli cells carrying the recombinant plasmid revealed that the **protein** exclusively located in the outer membrane, and N-terminal amino acid anal. of the expressed **protein** revealed that normal processing of the signal **peptide** had occurred. Immunogold electron microscopy showed that the protective epitope recognized by a P1-16 subtype-specific monoclonal antibody was exposed in an antigenically reactive form on the surface of E. coli cells carrying plasmid pPORA100. In contrast, expression in E. coli of a 2nd plasmid (pPORA 104) lacking the coding sequence for the 1st 15 amino acids of the signal **peptide** resulted in accumulation of recombinant class 1 **protein** only in the cytoplasm of the cells. Thus, the presence of the **meningococcal** signal sequence ensures expression of this **meningococcal** porin **protein** in an antigenically native conformation in outer membrane of E. coli, while its absence results in expression of a soluble **protein.** Such constructs illustrate the potential use of recombinant DNA technol. for the development of effective human vaccines against **meningococcal** infection.

L11 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 06 Jul 1990

ACCESSION NUMBER: 1990:403064 HCAPLUS
DOCUMENT NUMBER: 113:3064
TITLE: Production and partial purification of a gonococcal growth inhibitor produced by a strain of Neisseria **meningitidis** **isolated** from a homosexual man
AUTHOR(S): Dubreuil, D.; Bisaillon, J. G.; Beaudet, R.
CORPORATE SOURCE: Inst. Armand-Frappier, Univ. Quebec, Ville de Laval, QC, H7V 1B7, Can.
SOURCE: Microbios (1990), 61(248-249), 185-96
CODEN: MCBIA7; ISSN: 0026-2633
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A N. **meningitidis** strain **isolated** from the oropharynx of a homosexual man was shown to produce antigonococcal activity in vitro. A production method, on solid medium, was developed which yielded a soluble activity. The activity was detected at the end of logarithmic growth phase, and the maximum activity was reached after 24 h of incubation. The antigonococcal substance was purified more than 300 times by ammonium sulfate precipitation, gel filtration on Utrogel AcA 54, and chromatog. on DEAE-Sephacel. The **mol. weight** of the inhibitory substance, estimated by mol. filtration, was 29 + 103 daltons. The partially purified inhibitor showed two major bands, 32 and <12.5 + 103 daltons by **sodium dodecyl**-sulfate **polyacrylamide** **electrophoresis.** The chemical nature of the inhibitor is probably **protein** on the basis of trypsin sensitivity and the absorbance spectrum.

L11 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 13 Oct 1984
ACCESSION NUMBER: 1984:526341 HCAPLUS
DOCUMENT NUMBER: 101:126341
TITLE: IgA binding antibody
INVENTOR(S): Blake, Milan; Gotschlich, Emil; Russell-Jones, Gregory J.
PATENT ASSIGNEE(S): Rockefeller University, USA
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8402194	A1	19840607	WO 1983-US1904	19831201
W: AU, DK, JP, NO				
RW: AT, BE, CH, DE, FR, GB, LU, NL, SE				
AU 8424307	A1	19840618	AU 1984-24307	19831201
AU 563317	B2	19870702		
EP 127681	A1	19841212	EP 1984-900422	19831201
EP 127681	B1	19930303		
R: AT, BE, CH, DE, FR, GB, LI, LU, NL, SE				
JP 60500029	T2	19850110	JP 1984-500553	19831201
JP 07004267	B4	19950125		
CA 1221626	A1	19870512	CA 1983-442393	19831201
AT 86387	E	19930315	AT 1984-900422	19831201
JP 07004267	B4	19950125	JP 1983-505553	19831201
DK 8403705	A	19840730	DK 1984-3705	19840730

NO 8403094	A	19840801	NO 1984-3094		19840801
US 4757134	A	19880712	US 1986-829708		19860213
US 5202232	A	19930413	US 1991-759866		19910916
PRIORITY APPLN. INFO.:			US 1982-446317	A	19821202
			US 1982-446319	B2	19821202
			EP 1984-900422	A	19831201
			WO 1983-US1904	A	19831201
			US 1986-829708	A1	19860213
			US 1988-217822	B1	19880712

AB A method is described for the **isolation** and characterization of IgA-binding **protein** from the surface of group B streptococci (generally of 1b and 1c serotypes) for various purposes, such as testing a mammalian body fluid (characterized by the presence of IgA1 **protein**) for the presence of Neisseria infections. The **isolation** method involves boiling log-phase streptococci in an aqueous medium containing an anionic or nonionic detergent (SDS or PEG p-isobutylphenyl ether) or extracting with dilute aqueous HCl, followed by addition of a **protein**-precipitating agent (EtOH) at 0-10°. For the diagnosis of Neisseria infections, an absorbing surface is exposed to a solution of IgA-binding **protein**, the surface is washed with aqueous isotonic NaCl solution containing a nonionic detergent, then exposed to an aqueous solution of IgA (0.2-250 μg/mL, pH 5-10) containing MgCl2, followed by incubation with mammalian body fluid for 15 min-4 h at room temperature, incubation with alkaline phosphatase-conjugated antihuman light chain antiserum for 30 min at room temperature, and measuring the absorbance at 405 nm. The IgA-binding **protein** has a **mol. weight** of 132,000, as determined by **SDS-polyacrylamide gel electrophoresis**, and reacts specifically with the Fc portion of human IgA.

L11 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1983:419548 HCAPLUS
DOCUMENT NUMBER: 99:19548
TITLE: Effect of subinhibitory concentrations of antimicrobials on **meningococcal** adherence
AUTHOR(S): Salit, Irving E.
CORPORATE SOURCE: Div. Infect. Dis., Toronto Gen. Hosp., Toronto, ON, M5G 1L7, Can.
SOURCE: Canadian Journal of Microbiology (1983), 29(3), 369-76
CODEN: CJMIAZ; ISSN: 0008-4166
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Neisseria **meningitidis** Adheres to human pharyngeal cells and agglutinates erythrocytes. These events depend on pili and are reduced by encapsulation. The effect of subinhibitory concns. of 7 antimicrobials on **meningococcal** adherence, piliation, hemagglutination (HA), and bacterial **proteins** was studied to determination their potential for modifying virulence. Piliation was reduced by most antibiotics but was most markedly (>70%) reduced by rifampin, tobramycin, and VCN (vancomycin, colistin, and nystatin). Bacterial

proteins, as determined by **SDS-polyacrylamide gel electrophoresis** were altered; tetracycline, sulfamethoxazole, rifampin, and VCN caused loss of a 43-45-**kilodalton** (K) **protein** and a general decrease in all stainable **protein** bands, whereas erythromycin, ampicillin, and tobramycin only caused an increase in a 28 K **protein.** HA was reduced by ampicillin, tobramycin, erythromycin, and VCN, but interstrain variability was present. Epithelial cell adherence was diminished by an average of 45% as compared to controls. The **meningococcal** strains lost HA, piliation, and adherence in the same rank order, but there was no significant rank correlation of antibiotic inhibitory activities on these parameters. Apparently, subinhibitory antibiotic concns. reduce **meningococcal** piliation and alter other bacterial **proteins**; these changes are associated with diminished adherence and hemagglutination, alterations which might be markers of **meningococcal** virulence.

L11 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1981:117532 HCAPLUS
DOCUMENT NUMBER: 94:117532
TITLE: Energy-independent uptake of iron from citrate by **isolated** outer membranes of Neisseria **meningitidis**
AUTHOR(S): Simonson, Catherine; Trivett, Terrence; DeVoe, I. W.
CORPORATE SOURCE: Dep. Microbiol. Immunol., McGill Univ., Montreal, QC, H3A 2B4, Can.
SOURCE: Infection and Immunity (1981), 31(2), 547-53
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB CN--poisoned N. **meningitidis** SD1C cells rapidly took up 55Fe from Fe-citrate complexes during the 1st 2 min, after which no further Fe was accumulated. Citrate-14C was not taken up concomitantly with 55Fe by these cells. The 55Fe taken up by the poisoned cells was found in the membrane fraction after the cells were broken; 70% of the radioactivity was distributed in the outer membrane and 30% was in the inner membrane. **Isolated** outer membranes from Fe-starved cells were as capable of Fe uptake from citrate as intact cells were. As with whole cells, citrate-14C was not taken up by **isolated** outer membranes. A polyacrylamide **gel electrophoresis** anal. of the **proteins** from citrate-dialyzed outer membranes after the uptake of 55Fe revealed that the radioactivity was associated with a major band of 36,500 **mol. weight**

L11 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1981:43806 HCAPLUS
DOCUMENT NUMBER: 94:43806
TITLE: Variability of low-**molecular-weight**, heat-modifiable outer membrane **proteins** of Neisseria **meningitidis**
AUTHOR(S): Poolman, J. T.; De Marie, S.; Zanen, H. C.
CORPORATE SOURCE: Lab. Gezondheidsleer, Univ. Amsterdam, Amsterdam, 1092 AD, Neth.
SOURCE: Infection and Immunity (1980), 30(3), 642-8
CODEN: INFIBR; ISSN: 0019-9567

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Anal. of major outer-membrane **protein** (MOMP) profiles of various **meningococci** by **SDS-polyacrylamide gel electrophoresis (SDS-PAGE)** revealed the presence of 0-2 low-**mol.-weight**, heat-modifiable MOMPs (**mol. weight**, 25,000-32,000) and 1-3 high-**mol.-weight** MOMPs (**mol. weight**, 32,000-46,000). Heat modifiability was investigated by comparing MOMP profiles after heating in SDS solns. at 100° for 5 min or at 40° for 1 h. Low-**mol.-weight** MOMPs shifted to higher **mol. wts.** after being heated at 100°. Heat modifiability of high-**mol.-weight** MOMPs varied among strains; whenever modified, these **proteins** shifted to lower **mol. wts.** after complete denaturation. Variability of low-**mol.-wt**., heat-modifiable MOMPs was demonstrated when MOMP profiles of (1) **isolates** from index cases and associated cases and carriers among contacts, (2) different **isolates** from the same individual, and (3) **isolates** from a small epidmic caused by serogroup W-135 were compared. In some cases, high.-**mol.-wt**. MOMPs revealed quant. differences among related strains. The observed variability and quant. differences indicate that MOMP serotyping and typing on the basis of **SDS-PAGE** profiles need careful reevaluation.

L11 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1980:405909 HCAPLUS
DOCUMENT NUMBER: 93:5909
TITLE: Immunochemical characterization of Neisseria **meningitidis** serotype antigens by immunodiffusion and **SDS-polyacrylamide gel electrophoresis** immunoperoxidase techniques and the distribution of serotypes among cases and carriers
AUTHOR(S): Poolman, J. T.; Hopman, C. T. P.; Zanen, H. C.
CORPORATE SOURCE: Lab. Hyg., Univ. Amsterdam, Amsterdam, 1092 AD, Neth.
SOURCE: Journal of General Microbiology (1980), 116(2), 465-73
CODEN: JGMIAN; ISSN: 0022-1287
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A combination of immunodiffusion and the **Na dodecyl sulfate-polyacrylamide gel electrophoresis** immunoperoxidase technique showed that the antigens of the outer membrane of N. **meningitidis** of serotypes 1, 2, 6, 9, 11, and 12 were **proteins**, whereas those of serotypes 4, 5, and 8 were lipopolysaccharides. Serotype 2 could be divided into 3 related types, 2a (originally serotype 2), 2b, and 2c; the specific antigens were **proteins** of **mol. wts.** 41,000, 41,500, and 41,500 resp. The distribution of the various **meningococcal** serotypes among a group of strains **isolated** from patients and carriers is reported.

L11 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1977:466444 HCAPLUS

DOCUMENT NUMBER: 87:66444
TITLE: Homogeneity of **protein** serotype antigens in Neisseria **meningitidis** group A
AUTHOR(S): Sippel, J. E.; Quan, A.
CORPORATE SOURCE: Dep. Microbiol., Nav. Med. Res. Inst., Bethesda, MD, USA
SOURCE: Infection and Immunity (1977), 16(2), 623-7
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Serotype antigens (STA), i.e., outer-membrane **proteins**, were extracted from group A **meningococci** with 0.2 M LiCl and pelleted by centrifugation at 150,000 + g. The STAs from 100 group A strains, which had been **isolated** from cases and carriers in various geog. locations, were compared by **Na dodecyl** sulfate-**polyacrylamide gel electrophoresis** (**SDS-PAGE**). Every STA produced 3 major **protein** bands with **mol. wts.** of apprx.35,000, 39,000, and 45,000, resp. This **SDS-PAGE** pattern is distinct from that produced by the serotype of group B and C **meningococci** most commonly **isolated** from cases (group B type 2 and group C type 2). The group A STAs were also indistinguishable by immunodiffusion. However, differences in bactericidal reactions were demonstrated, suggesting that there are other antigens that play a role in antibody response.

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erved.

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L12          49 S L7
L13          76 S L5 AND (?KILOD? OR KD OR KDA? OR ?KILO(W)(DA OR DALTON))
L14           2 S L9
L15           0 S L10
                SET RENU ON
L16          23 S L13 AND (MW OR (M OR MOL OR MOLECUL?)(W)(W OR WT OR WEIGH
L17          58 S L12 OR L14 OR L16
L18          39 DUP REM L17 (19 DUPLICATES REMOVED)
```

L18 ANSWER 1 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:234852 BIOSIS
DOCUMENT NUMBER: PREV200300234852
TITLE: Preparation of monoclonal antibodies against major outer membrane **protein** of Neisseria gonorrhoeae.
AUTHOR(S): Zhou Wang [Reprint Author]; Zheng Wei; Shen Guan-xin; Zhu Hui-Fen; Zhang Yue; Xia Zheng-xi
CORPORATE SOURCE: Wuhan Institute of Dermatology and Venereology, Wuhan, 430030, China
SOURCE: Zhonghua Pifuke Zazhi, (February 2003) Vol. 36, No. 2, pp. 91-93. print.
ISSN: 0412-4030 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: Chinese
ENTRY DATE: Entered STN: 14 May 2003
Last Updated on STN: 14 May 2003

AB Objective: To establish a rapid, sensitive and specific diagnostic test for detecting Neisseria gonorrhoea. Methods: The major outer membrane **proteins** (PI) in different gonococcal serogroups were obtained by **isolation** of outer membrane complex with CTB-ethanol precipitation, the outer membrane **proteins** were extracted with Z3.14 and EDTA, and purified with DEAE-Sepharose CL-6B to obtain PI. Hybridoma cell lines producing McAbs against PI were established with lymphocyte hybridoma techniques. Results: The **molecular weight** of PIA and PIB were determined with **SDS-PAGE** as 35.2kDa and 36.7kDa, respectively. Five hybridoma cell lines producing McAbs continuouslly and stably against PIA and PIB were obtained, including two hybridoma cell lines producing McAbs against PIA and three hybridoma cell lines producing McAbs against PIB. The titers of McAbs in the supernatants in the cultures and in abdominal ascites of BALB/c were from 1:64 to 1:256 and from 1:4 096 to 1:16 384, respectively; and the specificity of the McAbs against PIA and PIB was so high that they easily reacted with N. gonorrhoeae but did not with other antigens such as N. **meningitidis** etc. Conclusion: The purified PI and the McAbs obtained in the study provide a basis to establish a rapid, sensitive and specific diagnostic test for detecting N. gonorrhoea.

L18 ANSWER 2 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 2002-471698 [50] WPIDS
DOC. NO. CPI: C2002-134191
TITLE: Use of collectin and/or its homologue and at least one immunogenic determinant in vaccine composition useful for immunizing an individual against an immunogenic determinant.
DERWENT CLASS: B04
INVENTOR(S): JENSENIUS, J C; SJOHOLM, A; SJOEHOLM, A

PATENT ASSIGNEE(S): (JENS-I) JENSENIUS J C; (SJOH-I) SJOHOLM A; (SJOH-I) SJOEHOLM A
COUNTRY COUNT: 100
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002041913	A1	20020530	(200250)*	EN	54
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZM ZW					
AU 2002018154	A	20020603	(200263)		
EP 1349573	A1	20031008	(200370)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
US 2004043034	A1	20040304	(200417)		
CN 1487839	A	20040407	(200441)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002041913	A1	WO 2001-DK786	20011127
AU 2002018154	A	AU 2002-18154	20011127
EP 1349573	A1	EP 2001-997311	20011127
		WO 2001-DK786	20011127
US 2004043034	A1	WO 2001-DK786	20011127
		US 2003-432715	20030815
CN 1487839	A	CN 2001-822291	20011127

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002018154	A Based on	WO 2002041913
EP 1349573	A1 Based on	WO 2002041913

PRIORITY APPLN. INFO: DK 2000-1785 20001127
AN 2002-471698 [50] WPIDS
AB WO 200241913 A UPAB: 20031017
NOVELTY - A vaccine composition comprises at least one collectin and/or its homologue (a) and at least one immunogenic determinant (b).
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the following:
(1) A kit of parts comprising the vaccine composition; and
(2) Use of (a) for the preparation of pharmaceutical composition.
ACTIVITY - None given.
MECHANISM OF ACTION - None given.
USE - For immunising an individual against an immunogenic determinant, vaccination and in kit (all claimed).
ADVANTAGE - The composition provides improved vaccines with enhanced immunogenecity. The adjuvant used in the composition optimises the efficacy of the composition and/or enhances the ability of the immunogenic composition to induce a desired immune response.
Dwg.0/4

L18 ANSWER 3 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-559312 [63] WPIDS
CROSS REFERENCE: 1991-081851 [12]; 1999-480840 [41]
DOC. NO. CPI: C2001-166448
TITLE: New homogeneous, insoluble **proteins** that bind tumor necrosis factor (TNF), useful for treating TNF-mediated disorders, e.g. inflammation.
DERWENT CLASS: B04 D16
INVENTOR(S): BROCKHAUS, M; DEMBIC, Z; GENTZ, R; LESSLAUER, W; LOETSCHER, H; SCHLAEGER, E
PATENT ASSIGNEE(S): (AHPM-N) AHP MFG BV; (HOFF) HOFFMANN LA ROCHE & CO AG F
COUNTRY COUNT: 10
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 1132471	A2	20010912	(200163)*	GE	26
R: AT BE CH DE DK FR GB IT LI NL					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1132471	A2 Div ex	EP 1990-116707	19900831
	Div ex	EP 1999-100703	19900831
		EP 2001-108117	19900831

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1132471	A2 Div ex	EP 417563
	Div ex	EP 939121

PRIORITY APPLN. INFO: CH 1990-1347 19900420; CH 1989-3319 19890912; CH 1990-746 19900308

AN 2001-559312 [63] WPIDS
CR 1991-081851 [12]; 1999-480840 [41]
AB EP 1132471 A UPAB: 20041125
NOVELTY - Insoluble **proteins** (I), also their (in)soluble fragments and pharmaceutically acceptable salts, able to bind tumor necrosis factor (TNF) and in homogeneous form, are new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(a) DNA sequences (II) that encode (I) or their fragments;
(b) recombinant **proteins** (Ia), encoded by (II), also allelic variants, and deletion, substitution and addition analogs;
(c) vector containing (II) for expression in prokaryotic or eukaryotic host systems;
(d) prokaryotic and eukaryotic host systems transformed with the vector of (c);
(e) antibodies (Ab) directed against (I) or its fragments;
(f) **isolating** (I); and
(g) producing (Ia).
ACTIVITY - Antiinflammatory; immunosuppressive; antibacterial; antiprotozoal. No supporting data is given.
MECHANISM OF ACTION - Neutralization of TNF by binding.
USE - (I), and related recombinant **proteins**, are used

to treat diseases mediated by TNF, e.g. shock in cases of **meningococcal** sepsis; development of autoimmune glomerulonephritis and cerebral malaria. Also (I), or antibodies specific for them, are used for diagnostic determination of TNF in body fluids, for affinity purification of TNF and for identifying (ant)agonists of TNF.
Dwg.0/4

L18 ANSWER 4 OF 39 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2001420191 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11468407
TITLE: Expression, refolding and crystallization of the OpcA invasin from Neisseria **meningitidis**.
AUTHOR: Prince S M; Feron C; Janssens D; Lobet Y; Achtman M; Kusecek B; Bullough P A; Derrick J P
CORPORATE SOURCE: Department of Biomolecular Sciences, UMIST, PO Box 88, Manchester, England.
SOURCE: Acta crystallographica. Section D, Biological crystallography, (2001 Aug) Vol. 57, No. Pt 8, pp. 1164-6. Electronic Publication: 2001-07-23. Journal code: 9305878. ISSN: 0907-4449.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 8 Oct 2001
Last Updated on STN: 8 Oct 2001
Entered Medline: 4 Oct 2001

AB OpcA is an integral outer membrane from the Gram-negative pathogen Neisseria **meningitidis** that plays a role in adhesion of **meningococci** to host cells. The **protein** was overexpressed in Escherichia coli in an insoluble form and a procedure developed for refolding by rapid dilution from denaturant into detergent solution. The refolded material was identical to native OpcA **isolated** from **meningococci**, as judged by overall **molecular weight**, migration on **SDS -PAGE** and reaction against monoclonal antibodies. Both native and recombinant OpcA crystallized under similar conditions to give an orthorhombic crystal form (P2(1)2(1)2), with unit-cell parameters a = 96.9, b = 46.3, c = 74.0 A. Complete data sets of reflections were collected from native and refolded OpcA to 2.0 A resolution.

L18 ANSWER 5 OF 39 EMBASE
ACCESSION NUMBER: 2001231775 EMBASE
TITLE: Molecular mimicry of host structures by lipooligosaccharides of Neisseria **meningitidis** : Characterization of sialylated and nonsialylated lacto-N-neotetraose (Galβ1-4GlcNacβ1-3Galβ1-4Glc) structures in lipooligosaccharides using monoclonal antibodies and specific lectins.
AUTHOR: Tsai C.-M.
CORPORATE SOURCE: C.-M. Tsai, Division of Bacterial Products, Ctr. for Biologics Evaluation/Res., FDA, Bethesda, MD 20892, United States
SOURCE: Advances in Experimental Medicine and Biology, (2001) Vol. 491, pp. 525-542. .
Refs: 79

ISSN: 0065-2598 CODEN: AEMBAP
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 004 Microbiology
005 General Pathology and Pathological Anatomy
026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jul 2001
Last Updated on STN: 19 Jul 2001

AB Neisseria **meningitidis** lipooligosaccharides (LOSs) are classified into 12 immunotypes. Most LOSs are heterogeneous in having a few components by **SDS-PAGE** analysis that differ antigenically and chemically. We have utilized a monoclonal antibody that recognizes lacto-N-neotetraose (LNnT) and the lectin, Maackia amurensis leukoagglutinin (MAL), which is specific for NeuNAcα2-3Galβ1-4GlcNAc trisacchride sequence to characterize the 12 N. **meningitidis** LOSs. Using the combination of ELISA, **SDS-PAGE**, Western blotting, and other chemical analyses, we have shown that the LNnT (Galβ1-4GlcNAcβ1-3Galβ1-4Glc) sequence was present in the 4.0-**kDa** LOS components of seven immunotype LOSs seen on **SDS-PAGE**. Six of the seven LNnT-containing LOSs also bound the MAL lectin indicating that N-acetylneuraminic acid (NeuNAc) was α2,3-linked to the LNnT sequence in the LOSs. Sialylation of the terminal Gal of LNnT-containing 4.0-**kDa** component caused only a slight increase in its apparent **MW** to 4100 on **SDS-PAGE**. The one LOS with the LNnT-containing component, but not MAL-binding, was from a Group A N. **meningitidis**, which does not synthesize CMP-NeuNAc, the substrate needed for LOS sialylation. Thus, it is concluded (1) a common LNnT sequence is present in seven immunotype LOSs in addition to their immunotype epitopes, and (2) NeuNAc is α2->3 linked to the terminal Gal of LNnT if a organism synthesizes CMP-NeuNAc such as Groups B and C organisms. The above conclusions are consistent with the published structures of N. **meningitidis** LOSs. The results also demonstrate that specific carbohydrate-binding lectins and monoclonal antibodies can be used as simple yet effective tools to characterize specific carbohydrate sequences in a bacterial LOS or LPS such as N. **meningitidis** LOS. It is intriguing that N. **meningitidis** LOSs mimic certain glycosphingolipids, such as paragloboside (LNnT-ceramide) and sialylparagloboside, and some glycoproteins of the host in having LNnT and N-acetyllactosamine sequences respectively with or without α2->3 linked NeuNAc. Epidemiological studies of N. **meningitidis** suggest that the molecular mimicry of host structures by its LOS plays a role in the pathogenesis of N. **meningitidis** by helping the organism to evade host immune defenses in man. The molecular mimicry of host structures by LOS or LPS is also found in other human pathogens such as N. gonorrhoeae, Haemophilus ducreyi, H. influenaze, Moraxella catarrhalis, Campylobacter jejuni, and Helicobacter pylori.

L18 ANSWER 6 OF 39 EMBASE

ACCESSION NUMBER: 2001290041 EMBASE
TITLE: Unusual antineisserial activity expressed by a systemic **isolate** of Neisseria **meningitidis**. Antimeningococcal effect and properties.
AUTHOR: Allunans J.; Bovre K.
CORPORATE SOURCE: Dr. J. Allunans, Kapt. W. Wilhelmsen og Frues Inst.,

University of Oslo, Rikshospitalet, NO-0027 Oslo, Norway

SOURCE: Scandinavian Journal of Infectious Diseases, (2001) Vol. 33, No. 7, pp. 516-522. .
Refs: 28
ISSN: 0036-5548 CODEN: SJIDB7

COUNTRY: Norway
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 6 Sep 2001
Last Updated on STN: 6 Sep 2001

AB Antineisserial activity expressed by the systemic Neisseria **meningitidis** strain 77/79A was studied using the cross-streaking technique. Of 271 **meningococcal isolates** tested, > 84% were sensitive to this strain. The degree of susceptibility was largely dependent upon the agent characteristics of the individual **isolates.** Serogroup A sulfonamide-resistant systemic strains and non-groupable sulfonamide-sensitive **isolates** from healthy carriers were highly sensitive to the antagonistic activity. Among insensitive or weakly sensitive strains, serogroup B sulfonamide-resistant **isolates** dominated. The activity is of general interest as it also antagonized growth of bacteriocin producers. Colonization by the producer strain might determine the agent characteristics of a surviving population. Group B was predominant among disease-causing strains in Norway at the time when strain 77/79A was **isolated** . A component was purified by ammonium sulfate precipitation, gel filtration and hydrophobic interaction chromatography. It was bacteriostatic and partly resistant to proteolysis by trypsin. Preparations remained active after 30 min at 90°C, but activity was lost after 20 min at 120°C. Nevertheless, **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** produced a band by Coomassie Brilliant Blue staining, corresponding to a molecular mass of ≈ 52 **kDa.** Further characterization was limited due to the low levels of active substance produced.

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ACCESSION NUMBER: 2005396379 EMBASE
TITLE: Antigenic analysis of Haemophilus influenzae based on biotypes and patterns of OMP P2.
AUTHOR: Hwang K.-J.; Kim K.S.; Lee Y.H.; Park K.S.; Lee K.J.; Min K.-H.
CORPORATE SOURCE: K.-J. Hwang, Laboratory of Respiratory Infections, Department of Bacteriology, National Institute of Health, 5 Nokbun-Dong, Eunpyung-Ku, Seoul, Korea, Republic of. kyuhwang@nih.go.kr
SOURCE: Journal of Bacteriology and Virology, (2001) Vol. 31, No. 4, pp. 299-306. .
Refs: 26
ISSN: 1598-2467 CODEN: JBVOAH
COUNTRY: Korea, Republic of
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
LANGUAGE: Korean

SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 29 Sep 2005
Last Updated on STN: 29 Sep 2005

AB To understand major antigenic **protein** profile and to analyze Onter membrane **protein** (OMP) P2 subtypes, 150 **isolates** including 14 Haemophilus influenzae serotype b (Hib) and, 136 of nontypeable H. influenzae (NTHI) strains were characterized by biotyping, **SDS-PAGE**, and immunoblotting with monoclonal antibodies. In NTHI biotyping, biotype I and II were the most representative ones, which includes 45 **isolates** (27.6%) and 31 **isolates** (19.0%), respectively. Hib strains were classified into biotype I, II, V, VI, and VIII. Any correlation could not be confirmed among the biotypes and the sources of specimen. Based on the **SDS-PAGE** patterns of OMP P2 **protein**, ranging from **MW** 32 **KDa** to 42 **KDa**, NTHI strains were classified into 8 subtypes. All of the serotype b strains showed identical pattern with the 38 **KDa**, except J18 which showed 36 **KDa**, OMP P2 **protein** profile. In **SDS-PAGE**, Hib OMP P2 showed distinctive difference from NTHI strains. Two monoclonal antibodies, 3F8 and 5E5, specific to the **protein** P2 were used to type the strains. Mab 5E5, which showed Haemophilus genus specificity, reacted with H. parainfluenzae 7901 and biotype aegyptius 11116, but not with N. **meningitidis**, S. pneumoniae, or E. coli. It was confirmed that the Mab 3F8 and 5E5 were directed against the surface exposed OMP epitope of immunized strain by immunogold electron microscopy. In conclusion, OMP P2 was a major antigenic **protein**, and was supposed to play an important role in antigen detection and to be used for the molecular epidemiologic study of H. influenzae **isolates**.

L18 ANSWER 8 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-256581 [22] WPIDS
CROSS REFERENCE: 2000-237782 [20]
DOC. NO. CPI: C2000-078252
TITLE: Neisseria **meningitidis** NMASP **polypeptide**, nucleotide sequences and antibodies, useful in vaccines against infection.
DERWENT CLASS: B04 D16
INVENTOR(S): HARRIS, A M; JACKSON, W J
PATENT ASSIGNEE(S): (ANTE-N) ANTEX BIOLOGICS INC
COUNTRY COUNT: 86
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000012535	A2	20000309	(200022)*	EN	75
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 9957894	A	20000321	(200031)		
EP 1109454	A2	20010627	(200137)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2002523077	W	20020730	(200264)		98

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000012535	A2	WO 1999-US19663	19990901
AU 9957894	A	AU 1999-57894	19990901
EP 1109454	A2	EP 1999-945257	19990901
		WO 1999-US19663	19990901
JP 2002523077	W	WO 1999-US19663	19990901
		JP 2000-567554	19990901

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9957894	A	Based on	WO 2000012535
EP 1109454	A2	Based on	WO 2000012535
JP 2002523077	W	Based on	WO 2000012535

PRIORITY APPLN. INFO: US 1998-98685P 19980901
AN 2000-256581 [22] WPIDS
CR 2000-237782 [20]
AB WO 200012535 A UPAB: 20021105
NOVELTY - An **isolated** Neisseria **meningitidis** NMASP **polypeptide**, which has a **molecular weight** of about 40-55 **kD**, determined by **sodium dodecyl** sulfate (**SDS**)-**PAGE** (**polyacrylamide gel electrophoresis**), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a **peptide** fragment of NMASP;

(2) an **isolated** antibody that specifically binds NMASP;

(3) an antigenic composition, vaccine or pharmaceutical composition comprising NMASP or a **peptide** fragment or an antibody of (2);

(4) an **isolated** DNA comprising a nucleotide sequence encoding NMASP or its fragments;

(5) an **isolated** DNA sequence having a 153 base pair (bp) sequence given in the specification;

(6) an **isolated** DNA which comprises a nucleotide sequence that hybridizes under high stringency conditions to a sequence of (5);

(7) plasmid pNmAH116 obtainable from Escherichia coli Top10 pNmAH116) as deposited with the ATCC and assigned accession number 98839;

(8) a method (A) for assaying for an agent that interacts with NMASP;

(9) an antagonist which inhibits the activity or expression of NMASP; and

(10) a method for identifying compounds which interact with and inhibitor or activate an activity of NMASP, comprising contacting the **polypeptide** with the compound to be screened under interaction conditions and assessing the interaction, an interaction being associated with a second component capable of providing a signal in the presence or absence of a signal generated by the interaction between the **polypeptide** and the compound.

ACTIVITY - Antibacterial; Anti-inflammatory.

MECHANISM OF ACTION - Vaccine.

USE - NMASP can be used in a method to produce an immune response in an animal. The sequences and antibodies are useful for protection

against N. **meningitidis**, the most common cause of bacterial **meningitidis** and septicemia in infants and young adults. The antibody is a cytotoxic antibody that mediates complement killing of N. **meningitidis**. NMASP and NMASP-derived **polypeptides** may be used as ligands to detect antibodies elicited in response to N. **meningitidis** infections.

ADVANTAGE - Antibody generated against the NMASP **polypeptide** in an animal host will exhibit bactericidal and/or opsonic activity against many Neisseria **meningitidis** strains and thus confer broad cross-strain protection. Bactericidal and/or opsonic antibody will prevent the bacterium from infecting the host and/or enhance the clearance of the pathogen by the host's immune system.

Dwg.0/2

L18 ANSWER 9 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 2000-237782 [20] WPIDS
CROSS REFERENCE: 2000-256581 [22]
DOC. NO. NON-CPI: N2000-178293
DOC. NO. CPI: C2000-072442
TITLE: Non-cytosolic NGSP **polypeptide** and polynucleotide sequence from Neisseria useful for diagnosis, prevention or treatment of Neisseria infections.
DERWENT CLASS: B04 C06 C07 D16 S03
INVENTOR(S): HARRIS, A M; JACKSON, W J
PATENT ASSIGNEE(S): (ANTE-N) ANTEX BIOLOGICS INC; (HARR-I) HARRIS A M; (JACK-I) JACKSON W J
COUNTRY COUNT: 87
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000012133	A1	20000309	(200020)*	EN	68
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 9959066	A	20000321	(200031)		
EP 1117436	A1	20010725	(200143)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
ZA 2001001755	A	20011128	(200202)		75
US 2002018782	A1	20020214	(200214)		
US 6693186	B2	20040217	(200413)		
US 6756493	B1	20040629	(200443)		
MX 2001002327	A1	20030901	(200465)		
US 2004191267	A1	20040930	(200465)		
US 2004229339	A1	20041118	(200477)		
US 2005136422	A1	20050623	(200542)		
MX 227163	B	20050404	(200571)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000012133	A1	WO 1999-US20070	19990901
AU 9959066	A	AU 1999-59066	19990901

EP 1117436	A1		EP 1999-946719	19990901
			WO 1999-US20070	19990901
ZA 2001001755	A		ZA 2001-1755	20010301
US 2002018782	A1	Provisional	US 1998-98685P	19980901
			US 1999-388089	19990831
US 6693186	B2	Provisional	US 1998-98685P	19980901
			US 1999-388089	19990831
US 6756493	B1	Provisional	US 1998-98685P	19980901
			US 1999-388090	19990831
MX 2001002327	A1		WO 1999-US20070	19990901
			MX 2001-2327	20010301
US 2004191267	A1	Provisional Div ex	US 1998-98685P	19980901
			US 1999-388090	19990831
			US 2004-840530	20040506
US 2004229339	A1	Provisional Div ex	US 1998-98685P	19980901
			US 1999-388089	19990831
			US 2003-749143	20031229
US 2005136422	A1	Provisional Div ex	US 1998-98685P	19980901
			US 1999-388090	19990831
			US 2004-840533	20040506
MX 227163	B		WO 1999-US20070	19990901
			MX 2001-2327	20010301

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9959066	A	Based on	WO 2000012133
EP 1117436	A1	Based on	WO 2000012133
MX 2001002327	A1	Based on	WO 2000012133
US 2004191267	A1	Div ex	US 6756493
US 2004229339	A1	Div ex	US 6693186
US 2005136422	A1	Div ex	US 6756493
MX 227163	B	Based on	WO 2000012133

PRIORITY APPLN. INFO: US 1998-98685P 19980901; US 1999-388089 19990831; US 1999-388090 19990831; US 2004-840530 20040506; US 2003-749143 20031229; US 2004-840533 20040506

AN 2000-237782 [20] WPIDS

CR 2000-256581 [22]

AB WO 200012133 A UPAB: 20051104

NOVELTY - **Isolated** NGSP **polypeptide** (I) of Neisseria spp. but not from N. **meningitidis** has a **molecular weight** of 40-55 **kD** determined by **sodium dodecyl** sulfate **polyacrylamide gel electrophoresis (SDS-PAGE)**.

The NGSP **polypeptide** is the whole, or a subunit of a non-cytosolic **protein** embedded in or located in the bacterial envelope which includes the inner membrane, outer surface and periplasmic space.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a **peptide** fragment (II) of (I);

(2) an antibody (III) that specifically binds (I) or a fragment of (I);

(3) an antigenic, pharmaceutical or vaccine composition comprising (I) or (II) and a carrier or diluent;

(4) a pharmaceutical composition comprising (III);

(5) an **isolated** DNA (IV) comprising a nucleotide sequence encoding (I), (II) or a fragment of these which has the defined sequence of 153, 1242, 1395, 69 or 46 base pairs given in the specification;

(6) an **isolated** DNA comprising a nucleotide sequence which hybridizes under high stringency conditions to (IV) or its complement;

(7) plasmid pTLZ-NgHtrA number 2 obtainable from Escherichia coli JM109 (pTLZ-NgHtrA number 2) (ATCC PTA-470);

(8) an antagonist which inhibits the activity or expression of (I);

(9) a method for identifying compounds which interact with, inhibit or activate an activity of (I) comprising contacting a composition comprising (I) with the candidate compound (A) to permit interaction between (A) and (I); (A) is associated with a second component capable of providing a detectable signal in response to interaction of (I) with (A) so that the presence or absence of a signal generated from the interaction is determined; and

(10) a method for assaying for an agent that interacts with (I) which can be used as a diagnostic, prophylactic or therapeutic agent against Neisseria infection comprising:

(i) contacting a cell expressing (I) with an agent labeled with a detectable marker for a sufficient length of time to allow interaction;

(ii) washing the cells; and

(iii) detecting any marker associated with the cells indicating that the agent interacts with (I).

ACTIVITY - Antibacterial.

No biological data given.

MECHANISM OF ACTION - Vaccine.

(I) has conserved Arg-Gly-Asp and Arg-Gly-Asn groups near the C-terminus which function as adherence domains for extracellular matrix **proteins.** Using (I) as a vaccine produces antibodies which inhibit (I) binding to the host's cellular matrix reducing attachment and/or subsequent invasion.

USE - (I) and (II) can be used to immunize an animal and produce an immune response (claimed). (I) and (II) can be used as ligands to detect antibodies elicited in response to Neisseria infections and also as antigens or immunogens for inducing Neisseria-specific antibodies which are useful in immunoassays to detect Neisseria in biological specimens. (IV) can be used as probes to identify Neisseria in biological specimens by hybridization or polymerase chain reaction amplification. (I) can also be used in screening assays to identify agents and compounds which useful as diagnostic, prophylactic or therapeutic agents against Neisseria infection (claimed).

Dwg.0/2

L18 ANSWER 10 OF 39 MEDLINE on STN

ACCESSION NUMBER: 1999160092 MEDLINE

DOCUMENT NUMBER: PubMed ID: 10052727

TITLE: Production, **isolation** and purification of bacteriocins expressed by two strains of Neisseria **meningitidis.**

AUTHOR: Allunans J; Bjoras M; Seeberg E; Bovre K

CORPORATE SOURCE: Kaptein W. Wilhelmsen og Frues Institute of Medical Microbiology, University of Oslo, Rikshospitalet, Norway.

SOURCE: APMIS : acta pathologica, microbiologica, et immunologica Scandinavica, (1998 Dec) Vol. 106, No. 12,

pp. 1181-7.
Journal code: 8803400. ISSN: 0903-4641.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199903
ENTRY DATE: Entered STN: 26 Mar 1999
Last Updated on STN: 26 Mar 1999
Entered Medline: 12 Mar 1999

AB The systemic Neisseria **meningitidis** strain P241 and the healthy pharyngeal carrier strain BT878 produce bacteriocin-like substances during growth. A method has been devised for obtaining the active substances in solution. The activity was **recovered** by freeze-thaw extraction of dialyzed Todd-Hewitt agar medium into which the bacteriocins had diffused during growth of the producer strains. The bacteriocins were purified more than 50-fold by ammonium-sulphate precipitation and hydrophobic interaction chromatography. They are quite stable to heat and remain active 100% after 30 min at 100 degrees C. However, the **protein** nature of the bacteriocins has been confirmed by their sensitivity to alpha-chymotrypsin. Gel filtration indicated an Mr of 100-110 **kDa**, whereas **SDS-polyacrylamide gel electrophoresis** produced a common band by Coomassie staining corresponding to an Mr of 47-48 **kDa**, suggesting a dimer form of the active **protein** component.

L18 ANSWER 11 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1997-373222 [35] WPIDS
DOC. NO. NON-CPI: N1997-309929
DOC. NO. CPI: C1997-120314
TITLE: Lactoferrin receptor **protein** **isolated** from bacterial pathogen - used as, e.g. vaccine, carrier for antigens and immunogens and diagnostic agents.
DERWENT CLASS: A96 B04 D16 S03
INVENTOR(S): BONNAH, R A; SCHRYVERS, A B
PATENT ASSIGNEE(S): (CONN-N) CONNAUGHT LAB LTD; (AVET) AVENTIS PASTEUR LTD
COUNTRY COUNT: 2
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
CA 2162193	A	19970503	(199735)*		50
US 6048539	A	20000411	(200025)		
US 6211343	B1	20010403	(200120)		
US 6344200	B1	20020205	(200211)		
US 6348198	B1	20020219	(200221)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CA 2162193	A	CA 1995-2162193	19951106
US 6048539	A	US 1995-552232	19951102
US 6211343	B1 Div ex	US 1995-552232	19951102
		US 1999-370869	19990810
US 6344200	B1 Div ex	US 1995-552232	19951102
		US 1999-371126	19990810

US 6348198	B1 Div ex	US 1995-552232	19951102
		US 1999-371127	19990810

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6211343	B1 Div ex	US 6048539
US 6344200	B1 Div ex	US 6048539
US 6348198	B1 Div ex	US 6048539

PRIORITY APPLN. INFO: US 1995-552232 19951102; US 1999-370869 19990810; US 1999-371126 19990810; US 1999-371127 19990810

AN 1997-373222 [35] WPIDS

AB CA 2162193 A UPAB: 19970828
Lactoferrin receptor **protein** (I) is **isolated** and purified from a bacterial **protein** and has **molecular weight** (**MW**) 70-90 **kDa** as determined by **SDS-PAGE.**

USE - The immunogenic composition can be used as a vaccine to a bacterial pathogen selected from Neisseria **meningitides**, N-gonorrhoeae, Moraxella catarrhalis, M. movis and M. lacunata (all claimed).

The **proteins** can be used in the diagnosis of and vaccination against diseases caused by bacterial pathogens that produce lactoferrin receptor **proteins** or **proteins** capable of raising antibodies reactive with lactoferrin receptor **proteins**. The **proteins** can be used as antigens, immunogenic preparations including vaccines, carriers for other antigens and immunogens and the generation of diagnostic reagents.

The bacterial pathogen may also be selected from Haemophilus influenzae, Streptococcus pneumoniae, Escherichia coli, Salmonella typhi, Streptococcus mutans, Cryptococcus neoformans, Klebsiella sp., Staphylococcus aureus and Pseudomonas aeruginosa.

(I; Lbp2) may also be used to induce immunity toward abnormal polysaccharides of tumour cells and to produce antitumour antibodies that can be conjugated to chemotherapeutic and bioactive agents.
Dwg.0/4

L18 ANSWER 12 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 2

ACCESSION NUMBER: 1998:77857 BIOSIS
DOCUMENT NUMBER: PREV199800077857
TITLE: Analysis of the OMP antigenicity of serogroup B **meningococci.**
AUTHOR(S): Gao, Lihui; Hu, Xujing; Xu, Li
CORPORATE SOURCE: Inst. Epidemiol. Microbiol., Chinese Acad. Preventive Med., Beijing 102206, China
SOURCE: Zhonghua Weishengwuxue He Mianyixue Zazhi, (Nov., 1997) Vol. 17, No. 6, pp. 416-420. print.
CODEN: ZWMZDP. ISSN: 0254-5101.
DOCUMENT TYPE: Article
LANGUAGE: Chinese
ENTRY DATE: Entered STN: 24 Feb 1998
Last Updated on STN: 24 Feb 1998

AB Based on the phenotypes and genotypes of serogroup B **meningococci isolated** from patients and carriers in China since the 1970s, 10 representative strains have been selected.

Outer membrane **proteins** (OMPs) of the above 10 strains were extracted, their **SDS-PAGE** profiles were found to be different, but each of them possessed the bands of class 1,2/3,4 and 5 OMPs with **MW** 28kD-**43kD.** Class 1 outer membrane **protein** (OMP1) was further purified from the 10 strains and each of them only showed one band with **MW** 41 or **43kD** by **SDS-PAGE.** Mice were immunized with 5 mug, 15 mug and 25 mug of the OMP1 purified from the two more representative strains 542852(B:NT:P1.2:L3,7,9:Clone I :RFLP-b20) and 3407 (B:15:P1.2:L3,7,9:Clone I :RFLP-b20), respectively. The titers of antibody elicited by OMP1 were determined by ELISA and bactericidal test. The subclasses of IgG against OMP1 were also examined by immunodiffusion test. The results showed that the highest titers of IgG were induced by 25 mug of OMP1 and the titer of IgG evoked by OMP1 of the strain 542852 was obviously higher than that of 3407. The specific antibody induced by OMP1 of the strain 542852 contained IgG1, IgG2a and IgG3, and had detectable bactericidal activity against serogroup B **meningococci** with same subtype. It was further indicated by Western blotting that the reactions of the above OMP1 with their antisera were specific.

L18 ANSWER 13 OF 39 EMBASE

ACCESSION NUMBER: 97370822 EMBASE
DOCUMENT NUMBER: 1997370822
TITLE: Characterisation of an outer membrane **protein** of Moraxella catarrhalis.
AUTHOR: Mathers K.E.; Goldblatt D.; Aebi C.; Yu R.-H.; Schryvers A.B.; Hansen E.J.
CORPORATE SOURCE: D. Goldblatt, Immunobiology Unit, Institute of Child Health, 30 Guilford Street, London WC1N 1EH, United Kingdom. d.goldblatt@ich.ucl.ac.uk
SOURCE: FEMS Immunology and Medical Microbiology, (1997) Vol. 19, No. 3, pp. 231-236. .
Refs: 22
ISSN: 0928-8244 CODEN: FIMIEV
PUBLISHER IDENT.: S 0928-8244(97)00088-6
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
011 Otorhinolaryngology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 18 Dec 1997
Last Updated on STN: 18 Dec 1997

AB To elucidate potential vaccine antigens, Moraxella catarrhalis outer membrane **proteins** (OMPs) were studied. We have previously shown an OMP to be a target for human IgG and have now further characterised this OMP which appears to have a molecular mass of 84 **kDa** and to be distinct from the 81-**kDa** OMP, CopB. Human transferrin was shown to bind the 84-**kDa** Chip alone. N-terminal sequencing of this OMP and purified M. catarrhalis transferrin binding **protein** B (TbpB) revealed homolog both with each other and with the TbpB of Haemophilus influenzae and Neisseria **meningitidis.** Adsorption of human anti-serum with purified TbpB from two M. catarrhalis strains abolished or reduced binding of IgG to the 84-**kDa** OMP from thee M. catarrhalis **isolates.** IgG binding to CopB was unaffected. It is clear

that the 84-**kDa** OMP is distinct from CopB and is a likely homologue of TbpB.

L18 ANSWER 14 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1996-190351 [20] WPIDS
DOC. NO. CPI: C1996-060823
TITLE: **Protein isolated** from Helicobacter pylori membrane - using affinity chromatography on a lactoferrin column, useful for production of vaccines against Helicobacter infections.
DERWENT CLASS: A96 B04 D16
INVENTOR(S): DUPUY, M; LISSOLO, L; QUENTIN-MILLET, M; KANG, L; QUENTIN, M M J; QUENTIN-MILLET, M B; QUENTINMILLET, M
PATENT ASSIGNEE(S): (INMR) PASTEUR MERIEUX SERUMS & VACCINS; (INMR) PASTEUR MERIEUX SERUMS & VACCINS SA
COUNTRY COUNT: 21
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
FR 2724936	A1	19960329	(199620)*		13
WO 9713784	A1	19970417	(199721)#	FR	20
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU CA JP US					
AU 9536579	A	19970430	(199734)#		
EP 797585	A1	19971001	(199744)#	FR	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 11502418	W	19990302	(199919)#		14
US 6086893	A	20000711	(200040)#		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2724936	A1	FR 1994-11323	19940922
WO 9713784	A1	WO 1995-FR1317	19951009
AU 9536579	A	AU 1995-36579	19951009
		WO 1995-FR1317	19951009
EP 797585	A1	EP 1995-934192	19951009
		WO 1995-FR1317	19951009
JP 11502418	W	WO 1995-FR1317	19951009
		JP 1997-514751	19951009
US 6086893	A	WO 1995-FR1317	19951009
		US 1997-860397	19971205

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9536579	A	Based on	WO 9713784
EP 797585	A1	Based on	WO 9713784
JP 11502418	W	Based on	WO 9713784
US 6086893	A	Based on	WO 9713784

PRIORITY APPLN. INFO: FR 1994-11323 19940922; WO 1995-FR1317 19951009; AU 1995-36579 19951009; EP 1995-934192 19951009; JP 1997-514751 19951009; US 1997-860397 19971205

AN 1996-190351 [20] WPIDS
AB FR 2724936 A UPAB: 19960520
New **protein** (I) which can be **isolated** from a Helicobacter sp. (especially H. pylori) membrane extract by affinity chromatography on a lactoferrin column comprises subunits with **mol. weight** 98 and 70 **kDa** (by **SDS-PAGE** in a 10% polyacrylamide gel).
USE - (I) is capable of binding to human lactoferrin and cross-reacts with a monoclonal antibody, raised against the Neisseria **meningitidis** transferrin receptor and can be used for the production of vaccines against Helicobacter infections (claimed).
Dwg.0/1

L18 ANSWER 15 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1995-382842 [49] WPIDS
DOC. NO. CPI: C1995-165454
TITLE: Heparin-binding **protein** (HBP) composition - for prevention and treatment of sepsis and other conditions.
DERWENT CLASS: B04 D16
INVENTOR(S): FLODGAARD, H J H; RASMUSSEN, P B; RASMUSSEN, P; FLODGARRD, H J H
PATENT ASSIGNEE(S): (NOVO) NOVO-NORDISK AS; (NOVO) NOVO NORDISK AS; (LEUK-N) LEUKOTECH AS
COUNTRY COUNT: 63
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9528949	A1	19951102	(199549)*	EN	48
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG					
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK TJ TT UA US UZ VN					
AU 9523033	A	19951116	(199608)		
NO 9604465	A	19961021	(199703)		
FI 9604227	A	19961021	(199704)		
EP 762889	A1	19970319	(199716)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
CZ 9603082	A3	19970813	(199739)		
HU 75557	T	19970528	(199805)		
JP 09512168	W	19971209	(199808)		46
KR 97702061	A	19970513	(199821)		
NZ 284434	A	19981223	(199906)		
AU 703963	B	19990401	(199925)		
MX 9604953	A1	19980201	(199954)		
CN 1146724	A	19970402	(200108)		
NZ 332683	A	20010629	(200140)		
CZ 289439	B6	20020116	(200215)		
MX 201104	B	20010322	(200226)		
HU 221638	B1	20021228	(200308)		
RU 2200573	C2	20030320	(200330)		
EP 762889	B1	20030507	(200333)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LT LU NL PT SE SI					
DE 69530689	E	20030612	(200346)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 9528949	A1	WO 1995-DK121	19950317
AU 9523033	A	AU 1995-23033	19950317
NO 9604465	A	WO 1995-DK121	19950317
		NO 1996-4465	19961021
FI 9604227	A	WO 1995-DK121	19950317
		FI 1996-4227	19961021
EP 762889	A1	EP 1995-916583	19950317
		WO 1995-DK121	19950317
CZ 9603082	A3	WO 1995-DK121	19950317
		CZ 1996-3082	19950317
HU 75557	T	WO 1995-DK121	19950317
		HU 1996-2895	19950317
JP 09512168	W	JP 1995-527282	19950317
		WO 1995-DK121	19950317
KR 97702061	A	WO 1995-DK121	19950317
		KR 1996-705869	19961019
NZ 284434	A	NZ 1995-284434	19950317
		WO 1995-DK121	19950317
AU 703963	B	AU 1995-23033	19950317
MX 9604953	A1	MX 1996-4953	19961018
CN 1146724	A	CN 1995-192688	19950317
NZ 332683	A	NZ 1995-332683	19950317
CZ 289439	B6	WO 1995-DK121	19950317
		CZ 1996-3082	19950317
MX 201104	B	MX 1996-4953	19961018
HU 221638	B1	WO 1995-DK121	19950317
		HU 1996-2895	19950317
RU 2200573	C2	WO 1995-DK121	19950317
		RU 1996-122777	19950317
EP 762889	B1	EP 1995-916583	19950317
		WO 1995-DK121	19950317
DE 69530689	E	DE 1995-630689	19950317
		EP 1995-916583	19950317
		WO 1995-DK121	19950317

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9523033	A	Based on	WO 9528949
EP 762889	A1	Based on	WO 9528949
CZ 9603082	A3	Based on	WO 9528949
HU 75557	T	Based on	WO 9528949
JP 09512168	W	Based on	WO 9528949
KR 97702061	A	Based on	WO 9528949
NZ 284434	A	Based on	WO 9528949
AU 703963	B	Previous Publ.	AU 9523033
		Based on	WO 9528949
CZ 289439	B6	Previous Publ.	CZ 9603082
		Based on	WO 9528949
HU 221638	B1	Previous Publ.	HU 75557
		Based on	WO 9528949
RU 2200573	C2	Based on	WO 9528949
EP 762889	B1	Based on	WO 9528949
DE 69530689	E	Based on	EP 762889
		Based on	WO 9528949

PRIORITY APPLN. INFO: DK 1994-1452 19941221; DK 1994-464 19940421

AN 1995-382842 [49] WPIDS
AB WO 9528949 A UPAB: 19951211
A pharmaceutical compsn. for prevention or treatment of diseases or conditions associated with induction of the cytokine cascade by lipopolysaccharide in glycosylated form, has an apparent **mol weight** of 28 **kD** (**SDS-PAGE**, reducing conditions). The HBP is produced in the azurophil granules of polymorphonuclear leukocytes, and is complexed with a carrier or diluent.
USE - The HBP compsn. is useful for prevention or treatment of gram-negative sepsis, septic shock, or disseminated intravascular coagulation, or **meningococcal** meningitis.
Dwg.0/4

L18 ANSWER 16 OF 39 MEDLINE on STN
ACCESSION NUMBER: 95236257 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7719906
TITLE: Serum antibody response to **proteins** of Moraxella (Branhamella) catarrhalis in patients with lower respiratory tract infection.
AUTHOR: Christensen J J; Renneberg J; Bruun B; Forsgren A
CORPORATE SOURCE: Department of Clinical Microbiology, Bispebjerg Hospital, Copenhagen, Denmark.
SOURCE: Clinical and diagnostic laboratory immunology, (1995 Jan) Vol. 2, No. 1, pp. 14-7.
Journal code: 9421292. ISSN: 1071-412X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 5 Jun 1995
Last Updated on STN: 6 Feb 1998
Entered Medline: 24 May 1995
AB We searched for antibodies against Moraxella (Branhamella) catarrhalis **proteins** in the sera of patients with lower respiratory tract infection. Sera from 48 patients with M. catarrhalis and 39 patients without M. catarrhalis in their lower respiratory tract specimens were studied by a **gel electrophoresis**-immunoperoxidase technique; sera from 23 healthy adult blood donors were also included. Immunoglobulin G (IgG) antibodies against a 28-**kDa protein** were found significantly more frequently in patients with M. catarrhalis in lower respiratory tract specimens (71%) than in patients without M. catarrhalis in lower respiratory tract specimens (28%) or healthy adult blood donors (22%). Seroconversion, from the acute to the convalescent stages, occurred in at least eight patients with M. catarrhalis and in one patient without detectable M. catarrhalis. IgG antibodies against other M. catarrhalis **proteins** were found in most sera, including those obtained from blood donors. By adsorption experiments the 28-**kDa protein** was demonstrated to be surface exposed. IgM antibodies against an 85-**kDa protein** were found in serum from one patient from whom M. catarrhalis and Streptococcus pneumoniae were **isolated** from the lower respiratory tract, while IgA antibodies against M. catarrhalis **proteins** could not be detected in any serum specimen.

L18 ANSWER 17 OF 39 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 93316845 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8326861

TITLE: Phospholipid substitution of capsular polysaccharides and mechanisms of capsule formation in Neisseria **meningitidis.**
AUTHOR: Frosch M; Muller A
CORPORATE SOURCE: Institut fur Medizinische Mikrobiologie, Medizinische Hochschule Hannover, Germany.
SOURCE: Molecular microbiology, (1993 May) Vol. 8, No. 3, pp. 483-93.
Journal code: 8712028. ISSN: 0950-382X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-Z13995
ENTRY MONTH: 199308
ENTRY DATE: Entered STN: 20 Aug 1993
Last Updated on STN: 3 Feb 1997
Entered Medline: 6 Aug 1993

AB Within the capsule gene complex (cps) of Neisseria **meningitidis** two functional regions B and C are involved in surface translocation of the cytoplasmically synthesized capsular polysaccharide, which is a homopolymer of alpha-2,8 polyneuraminic acid. The region-C gene products share characteristics with transporter **proteins** of the ABC (ATP-binding cassette) superfamily of active transporters. For analysis of the role of region B in surface translocation of the capsular polysaccharide we purified the polysaccharides of region B- and region C-defective Escherichia coli clones by affinity chromatography. The **molecular weights** of the polysaccharides were determined by gel filtration and the polysaccharides were analysed for phospholipid substitution by polyacrylamide **gel electrophoresis** and immunoblotting. The results indicate that the full-size capsular polysaccharide with a phospholipid anchor is synthesized intracellularly and that lipid modification is a strong requirement for translocation of the polysaccharide to the cell surface. **Proteins** encoded by region B are involved in phospholipid substitution of the capsular polysaccharide. Nucleotide sequence analysis of region B revealed two open reading frames, which encode **proteins** with molecular masses of 45.1 and 48.7 **kDa.**

L18 ANSWER 18 OF 39 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 92267655 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1587606
TITLE: Common antigenic domains in transferrin-binding **protein** 2 of Neisseria **meningitidis**, Neisseria gonorrhoeae, and Haemophilus influenzae type b.
AUTHOR: Stevenson P; Williams P; Griffiths E
CORPORATE SOURCE: National Institute for Biological Standards and Control, Potters Bar, Hertfordshire, United Kingdom.
SOURCE: Infection and immunity, (1992 Jun) Vol. 60, No. 6, pp. 2391-6.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199206
ENTRY DATE: Entered STN: 10 Jul 1992

Last Updated on STN: 18 Dec 2002
Entered Medline: 23 Jun 1992

AB There is now considerable evidence to show that in the Neisseria and Haemophilus species, membrane receptors specific for either transferrin or lactoferrin are involved in the acquisition of iron from these glycoproteins. In Neisseria **meningitidis**, the transferrin receptor appears to consist of two **proteins**, one of which (TBP 1) has an M(r) of 95,000 and the other of which (TBP 2) has an M(r) ranging from 68,000 to 85,000, depending on the strain; TBP 2 binds transferrin after **sodium dodecyl sulfate-polyacrylamide gel electrophoresis** and electroblotting, but TBP 1 does not do so. The relative contributions of these two **proteins** to the binding reaction observed with intact cells and to iron uptake are presently unknown. However, they are being considered as potential components of a group B **meningococcal** vaccine. Analogous higher- and lower-**molecular-weight proteins** associated with transferrin binding have been found in N. gonorrhoeae and Haemophilus influenzae. Previous work with polyclonal antibodies raised in mice with whole cells of iron-restricted N. **meningitidis** showed that the **meningococcal** TBP 2 exhibits considerable antigenic heterogeneity. Here, we report that antiserum against purified TBP 2 from one strain of N. **meningitidis** cross-reacts on immunoblotting with the TBP 2 of all **meningococcal isolates** examined, as well as with the TBP 2 of N. gonorrhoeae. This antiserum also cross-reacted with the TBP 2 of several strains of H. influenzae type b, thus showing the presence of common antigenic domains among these functionally equivalent **proteins** in different pathogens; no cross-reaction was detected with a purified sample of the human transferrin receptor.

L18 ANSWER 19 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1991-088830 [13] WPIDS
DOC. NO. NON-CPI: N1991-068678
DOC. NO. CPI: C1991-037733
TITLE: Monoclonal antibody, specific for N. gonorrhoeae - used for clinical diagnosis of all serotypes of gonorrhoea.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): HADFIELD, S G; LANE, A; WESTON, P D
PATENT ASSIGNEE(S): (WELL) WELLCOME FOUND LTD; (WELL) WELLCOME RES LAB
COUNTRY COUNT: 17
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 419238	A	19910327	(199113)*		
R: AT BE CH DE ES FR GB IT LI LU NL SE					
AU 9062691	A	19910411	(199122)		
CA 2025684	A	19910321	(199122)		
JP 03187397	A	19910815	(199139)		
ZA 9007279	A	19920527	(199228)		32
US 5246851	A	19930921	(199339)		7

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 419238	A	EP 1990-310265	19900919
JP 03187397	A	JP 1990-251666	19900920

ZA 9007279	A	ZA 1990-7279	19900912
US 5246851	A	US 1990-580915	19900912

PRIORITY APPLN. INFO: GB 1989-21227 19890920
AN 1991-088830 [13] WPIDS
AB EP 419238 A UPAB: 19930928
A new monoclonal antibody (I), specific for Neisseria gonorrhoeae is capable of binding to a **protein** obtainable from N. gonorrhoeae of **mol. weight** ca. 14 **KD** (**SDS-PAGE**).

Also claimed are: (1) an immortalised cell line secreting (I) which is hybridoma NG 28 (ECACC 89071901); (2) a 14 **KD** **protein** from N. gonorrhoeae; (3) a process for preparing (I) comprising: (a) culturing an immortalised cell line which secretes (I); and (b) **isolating** (I); (4) a process for preparing the cell line of (1) comprising immunising an animal with the **protein** of (2), obtaining the resulting B cells, fusing these with myeloma cells and screening the resulting immortalised cell lines for one secreting (I); (5) a process for preparing the **protein** of (2) comprising extracting N. gonorrhoeae to release the **protein**, contacting the extract with (I) and **recovery** bound **protein**; and (6) a process for preparing polyclonal antibody (II), capable of binding the **protein** of (2) by injecting this **protein** into an animal and **recovering** antibody produced which can bind the **protein**.

USE/ADVANTAGE - (I) is useful for determining N. gonorrhoeae in a sample. It reacts with a N. gonorrhoeae-specific epitope occurring in all N. gonorrhoeae sero-types tested. Clinical gonorrhoeae can be diagnosed effectively.

0/0

ABEQ US 5246851 A UPAB: 19931123
Monoclonal antibody is specific for Neisseria gonorrhoeae and specifically binds to a **protein** obtd. from it, without cross-reacting with N. **meningitidis**. **Protein** has **molecular wt.** 1xKD (**SDS-PAGE**) and specifically binds to antibody secreted by hybridoma NG28 (Hybridoma No. ECACC89071901).

Pref. an immortalised cell line secretes the antibody which is hybridoma NG28.

USE - For diagnosis of clinical gonorrhoea which is distinguishable from N. **meningitidis**.

Dwg.0/0

L18 ANSWER 20 OF 39 TOXCENTER COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:127800 TOXCENTER
COPYRIGHT: Copyright 2006 ACS
DOCUMENT NUMBER: CA116131245 11A
TITLE: Influence of the nature of strains on the character of the production of iron-regulated **proteins** by **meningococci**
AUTHOR(S): Gorbacheva, B. O.; Filatova, T. N.; Petrov, A. B.
CORPORATE SOURCE: NII Vaktsin Syvorotok im. Mechnikova, Moscow, USSR.
SOURCE: Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, (1991) No. 11, pp. 14-17.
CODEN: ZMEIAV. ISSN: 0372-9311.
COUNTRY: USSR
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1992:124511

LANGUAGE: Russian
ENTRY DATE: Entered STN: 16 Nov 2001
Last Updated on STN: 8 Oct 2002
AB Three Neisseria **meningitidis** strains (15, 125, 2394) were compared by **SDS-PAGE** and immunoblotting. The high expression of 8 Fe-regulated **proteins** (IRP) occurred in Fe-deficient media. The major IRP, with a **mol. wt** . of 35 **kD**, was expressed by all 3 N. **meningitidis** strains in Fe deficiency and cross-reacted with 10 mouse and rabbit antisera to N. **meningitidis** of different groups, i.e. it was common to all Neisseria spp. The antigenic activity of various IRP essentially differed with respect to antisera of animals and sera of patients with **meningococcal** infection.

L18 ANSWER 21 OF 39 PASCAL COPYRIGHT 2006 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1991-0145783 PASCAL
TITLE (IN ENGLISH): The 70 **kilodalton** iron regulated **protein** of Neisseria **meningitidis** is not the transferrin receptor
AUTHOR: ALA'ALDEEN D. A.; DAVIES H. A.; WALL R. A.; BORRIELLO S. P.
CORPORATE SOURCE: MRC clin. res. cent., microbial pathogenicity res. group, Harrow Middlesex HA1 3UJ, United Kingdom
SOURCE: FEMS microbiology letters, (1990), 69(1-2), 37-42, 11 refs.
ISSN: 0378-1097
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Netherlands
LANGUAGE: English
AVAILABILITY: INIST-17567 A, 354000008194000070
AN 1991-0145783 PASCAL
AB Neisseria **meningitidis** is able to chelate iron from human transferrin (HTF), the main sequestrator of extracellular iron in vivo. We have examined the interaction between the iron regulated outer membrane **proteins** (OMP's) and HTF, using HTF and rabbit anti HTF, as well as gold labelled HTF (Au-HTF) to blot OMP's of various serogroups and serotypes of N. **meningitidis**

L18 ANSWER 22 OF 39 PASCAL COPYRIGHT 2006 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1991-0126643 PASCAL
TITLE (IN ENGLISH): Antigenic and molecular heterogeneity of the transferrin-binding **protein** of Neisseria **meningitidis**
AUTHOR: GRIFFITHS E.; STEVENSON P.; RAY A.
CORPORATE SOURCE: National inst. biological standards control, Potters Bar, Hertfordshire EN6 3QG, United Kingdom
SOURCE: FEMS microbiology letters, (1990), 69(1-2), 31-36, 19 refs.
ISSN: 0378-1097
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Netherlands
LANGUAGE: English
AVAILABILITY: INIST-17567 A, 354000008194000060
AN 1991-0126643 PASCAL
AB The transferrin-binding **protein** in 35 Neisseria **meningitidis isolates** was examined using a binding

assay involving .sup.1.sup.2.sup.5I-transferrin. The results show that most strains have a binding **protein** with a M.sub.r between 78 **kDa** and 83 **kDa**; only 4 strains had a binding **protein** with a M.sub.r of about 68 **kDa**

L18 ANSWER 23 OF 39 MEDLINE on STN
ACCESSION NUMBER: 89341410 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2474610
TITLE: Human IgA1 initiates complement-mediated killing of Neisseria **meningitidis.**
AUTHOR: Jarvis G A; Griffiss J M
CORPORATE SOURCE: Center for Immunochemistry, University of California, San Francisco.
CONTRACT NUMBER: AI21171 (NIAID)
SOURCE: Journal of immunology (Baltimore, Md. : 1950), (1989 Sep 1) Vol. 143, No. 5, pp. 1703-9.
Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198909
ENTRY DATE: Entered STN: 9 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 13 Sep 1989

AB We studied the effect of human IgA1, the predominant IgA subclass in serum, on C-mediated killing of Neisseria **meningitidis.** We purified monomeric IgA1 from normal human serum and tetravalent **meningococcal** polysaccharide vaccinate serum by using the following successive chromatographic steps: jacalin lectin affinity, Superose 12 FPLC gel filtration, Mono Q FPLC anion exchange, and anti-IgG affinity. **SDS-PAGE**, ELISA, and Western immunoblot analyses of the IgA1 detected no trace of contaminating IgG or IgM. IgA1 initiated partial or complete lysis (62 to 100%) of nine group C strains by using either normal, hypogammaglobulinemic, factor B-depleted, or properdin-deficient human serum as a C source, but IgA1 was unable to effect killing in serum chelated with 10 mM MgCl2 and 10 mM EGTA. Lytic activity was dependent on the group C strain and the source of the IgA1; neither IgA1 preparation was bactericidal for all nine strains. Removal of the Fc portion of IgA1 with pepsin completely abolished bactericidal activity. We purified and radiolabeled C component C3, and found that IgA1 did not increase C3 deposition. With the use of a group C polysaccharide ELISA, we found that the vaccinate IgA1 had a high titer of group C polysaccharide antibody, whereas the IgA1 purified from normal human serum had no detectable group C polysaccharide specificity. Absorption of the vaccinate IgA1 with alum-bound group C polysaccharide did not affect the killing of a sensitive strain, but it did potentiate the killing of a previously resistant strain. Western immunoblots of whole cell lysates, outer membrane complex, and purified lipooligosaccharide showed that the bactericidal IgA1 was specific for several outer membrane **proteins.** Four of the **proteins** recognized by both IgA1 preparations had apparent Mr of 29, 42, 66, and 74 **kDa.** We conclude that IgA1, when bound to specific outer membrane **proteins**, can initiate lysis of group C **meningococci** via the classical C pathway, and that initiation of lysis is an Fc-dependent event which occurs without an increase in C3 deposition.

L18 ANSWER 24 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 1988-212845 [30] WPIDS
CROSS REFERENCE: 1984-158728 [25]
DOC. NO. CPI: C1988-095074
TITLE: New IgA binding **protein** from gp. B streptococci - useful as solid phase absorbent and in enzyme linked immuno-sorbent assay.
DERWENT CLASS: B04 D16
INVENTOR(S): BLAKE, M; GOTSCHLICH, E; RUSSELLJON, G J
PATENT ASSIGNEE(S): (UYRQ) UNIV ROCKEFELLER
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4757134	A	19880712	(198830)*		6

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4757134	A	US 1986-829708	19860213

PRIORITY APPLN. INFO: US 1982-446317 19821202; US 1986-829708 19860213
AN 1988-212845 [30] WPIDS
CR 1984-158728 [25]
AB US 4757134 A UPAB: 19950306
New IgA binding cell wall bound **protein** (I) is **isolated** from Group B Streptococci and has the following characteristics: (i) **mol.weight** 132000 as determd. by **sodium dodecyl** sulphate **polyacrylamide gel electrophoresis**; (ii) reacts specifically with the Fc portion of the human IgA; (iii) is hydrolysable by protease; (iv) contains the following aminoacids in the residues per 130000 **mol.weight** indicated: Asp 158, Thr 81, Ser 58, Glu 204, Pro 57, Gly 37, Ala 62, Met 18, Val 75, Ile 52, Leu 86, Tyr 23, Phe 27, His 26, Tyr 158, Arg 19, (v) the N-terminal sequence as determd. by Edman degradation is: Ser-Lys-Leu-Val-Lys-Asp- Lys-Leu-Val-Lys-Thr-Lys-Glu.

Various embodiments describing the separation of (I) from the surface of a gp. B Streptococci are also claimed.

USE - (I) can be employed in 2 distinct solid phase systems. In the first system (I) is absorbed on a solid phase support as in column chromatography. In the second, (I) is bound to an absorbing surface, such as plastic plate or test well, for use in an ELISA. As a solid phase absorbent, (I) can be used to remove IgA of all classes from serum or other human fluid and to determine the antigen specificity of IgA antibody. Applicns. of (I) in the second system (plastic plate) include determn. of IgA concentration in serum or a secretion, detection of gonorrhea, determn. of the presence of bacterial meningitis caused by Neisseria **meningitidis**, Haemophilus influenzae and Diplococcus pneumonial, and determn. of IgA1 and IgA2.
0/0
Dwg.0/0
ABEQ EP 127681 B UPAB: 19930923
An IgA binding **protein isolatable** from the surface of Group B streptococci, said **protein** having a **molecular weight** of 132,000 when determined by **sodium dodecyl** sulphate **polyacrylamide**

gel electrophoresis and being capable of binding to human IgA by reacting specifically with the Fc portion thereof.
0/0

L18 ANSWER 25 OF 39 MEDLINE on STN
ACCESSION NUMBER: 88246055 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3132585
TITLE: Identification and characterization of the transferrin receptor from Neisseria **meningitidis.**
AUTHOR: Schryvers A B; Morris L J
CORPORATE SOURCE: Department of Microbiology and Infectious Diseases, University of Calgary, Alberta, Canada.
SOURCE: Molecular microbiology, (1988 Mar) Vol. 2, No. 2, pp. 281-8.
Journal code: 8712028. ISSN: 0950-382X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198807
ENTRY DATE: Entered STN: 8 Mar 1990
Last Updated on STN: 8 Mar 1990
Entered Medline: 27 Jul 1988
AB Expression of the **meningococcal** transferrin receptor, detected by assay with human transferrin conjugated to peroxidase, was regulated by the level of iron in the medium. The transferrin receptor was identified by **SDS-PAGE** and Western blot analysis, as a 71,000 **molecular weight** iron-regulated outer membrane **protein** in Neisseria **meningitidis** B16B6. Growth studies with iron-deficient cells and competition binding experiments demonstrated that the **meningococcal** receptor was species-specific for human transferrin. Reciprocal competitive binding experiments and limited proteolysis of intact cells indicated that the transferrin and lactoferrin receptors are distinct.

L18 ANSWER 26 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 87151700 EMBASE
DOCUMENT NUMBER: 1987151700
TITLE: Antigens that are similar in apparent **molecular weight** to gonococcal outer membrane **protein** III.
AUTHOR: Barrera O.; Swanson J.
CORPORATE SOURCE: Laboratory of Microbial Structure and Function, Rocky Mountain Laboratories, National Institute of Allergy and Infectious Diseases, Hamilton, MT 59840, United States
SOURCE: Journal of Clinical Microbiology, (1987) Vol. 25, No. 7, pp. 1155-1158. .
CODEN: JCMIDW
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
ENTRY DATE: Entered STN: 11 Dec 1991
Last Updated on STN: 11 Dec 1991
AB Two immunoglobulin G monoclonal antibodies (MAbs) were produced by using purified outer membranes and whole gonococci as immunogens. These MAbs recognized antigens with similar apparent sizes (30 to 31.5

kilodaltons [**kDa**]) in several pathogenic and nonpathogenic neisseriae. In gonococci, these 30- to 31.5-**kDa** components, althoughs similar in subunit size to outer membrane **protein** III (P.III), are distinct due to their differences in electrophoretic migration-modification by 2-mercaptoethanol and their cellular location. The two 30- to 31.5-**kDa** moieties are denoted by MAb2 and MAb3, respectively, by which they are identified. The differentiating characteristics of these three antigens (P.III, MAb2, MAb3) is their change or lack of change in electrophoretic mobility in the presence versus absence of 2-mercaptoethanol; P.III migrates less rapidly, MAb2 does not change, and MAb3 migrates more rapidly. Both the epitopes that were reactive with MAb2 and MAb3 were resistant to proteolytic treatment of intact gonococci; neither epitope was detected on whole, unfixed gonococci by immunofluorescence. Both MAb2 and MAb3 epitopes were represented uniformly among pathogenic neisseriae (except group Z **meningococci**) and less regularly among nonpathogenic neisseriae.

L18 ANSWER 27 OF 39 MEDLINE on STN
ACCESSION NUMBER: 85264987 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3894684
TITLE: Neuraminidase associated with coliphage E that specifically depolymerizes the Escherichia coli K1 capsular polysaccharide.
AUTHOR: Tomlinson S; Taylor P W
SOURCE: Journal of virology, (1985 Aug) Vol. 55, No. 2, pp. 374-8.
Journal code: 0113724. ISSN: 0022-538X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198508
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 27 Aug 1985

AB Plaque morphology indicated that the five Escherichia coli K1-specific bacteriophages (A to E) described by Gross et al. (R. J. Gross, T. Cheasty, and B. Rowe, J. Clin. Microbiol. 6:548-550, 1977) encode K1 depolymerase activity that is present in both the bound and free forms. The free form of the enzyme from bacteriophage E was purified 238-fold to apparent homogeneity and in a high yield from ammonium sulfate precipitates of cell lysates by a combination of CsCl density gradient ultracentrifugation, gel filtration, and anion-exchange chromatography. The enzyme complex had an apparent **molecular weight** of 208,000, as judged from its behavior on **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis**, and was dissociated by sodium dodecyl sulfate at 100 degrees C to yield two **polypeptides** with apparent **molecular weights** of 74,000 and 38,500. Optimum hydrolytic activity was observed at pH 5.5, and activity was strongly inhibited by Ca2+; the Km was 7.41 X 10(-3) M. Rapid hydrolysis of both the O-acetylated and non-O-acetylated forms of the K1 antigen, an alpha 2----8-linked homopolymer of N-acetylneuraminic acid, and of the **meningococcus** B antigen was observed. Limited hydrolysis of the E. coli K92 antigen, an N-acetylneuraminic acid homopolymer containing alternating alpha 2----8 and alpha 2----9 linkages, occurred, but the enzyme failed to release alpha 2----3-, alpha 2----6-, or alpha 2----9-linked sialic

residues from a variety of other substrates.

L18 ANSWER 28 OF 39 MEDLINE on STN
ACCESSION NUMBER: 85181619 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2580788
TITLE: Structural and antigenic analysis of **meningococcal** piliation.
AUTHOR: Olafson R W; McCarthy P J; Bhatti A R; Dooley J S; Heckels J E; Trust T J
SOURCE: Infection and immunity, (1985 May) Vol. 48, No. 2, pp. 336-42.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198506
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 29 Jan 1999
Entered Medline: 10 Jun 1985

AB Pilin with an Mr of 16,500 was purified to homogeneity from Neisseria **meningitidis** SP3428. Procedures which provided useful separation during purification included high-pressure liquid chromatography with a TSK size exclusion column, Sephacryl S-200 column chromatography, ion-exchange chromatography with SP-Sephadex, and preparative **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis.** The amino acid composition of this pilin was similar to that previously reported for this species. The sequence of N-terminal 51 amino acids was also determined. The **protein** lacked a modified phenylalanine at the amino terminus and displayed six residues which were different from Neisseria gonorrhoeae in that region of the molecule determined to be the lectin-binding domain. Monoclonal antibody raised to this pilin was employed, along with a monoclonal antibody to an epitope common to all gonococcal pilins, to analyze the intra- and interstrain heterogeneity of **meningococcal** piliation. The results indicate that N. **meningitidis** displays considerable intra- and interstrain heterogeneity with respect to both pilus subunit size and antigenicity. The Mr of subunits ranged from 13,000 to 20,000.

L18 ANSWER 29 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1984-158728 [25] WPIDS
CROSS REFERENCE: 1988-212845 [30]
DOC. NO. NON-CPI: N1984-117979
DOC. NO. CPI: C1984-067005
TITLE: Separation of IgA binding **protein** from surface of Gp.B streptococcus - useful in testing for Neisseria **meningitidis** or gonorrhoea.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): BLAKE, M; GOTSCHLICH, E; RUSSELL-JONES, J; RUSSELLJON, G J; RUSSELL-JONES, G J
PATENT ASSIGNEE(S): (UYRQ) UNIV ROCKEFELLER
COUNTRY COUNT: 16
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 8402194	A	19840607	(198425)*	EN	21
RW: AT BE CH DE FR GB LU NL SE					

W: AU DK JP NO

AU 8424307	A	19840618	(198439)	
NO 8403094	A	19841015	(198448)	
EP 127681	A	19841212	(198450)	EN
R: AT BE CH DE FR GB LI LU NL SE				
JP 60500029	W	19850110	(198508)	
DK 8403705	A	19840730	(198601)	
CA 1221626	A	19870512	(198723)	
EP 127681	B1	19930303	(199309)	EN 9
R: AT BE CH DE FR GB LI LU NL SE				
DE 3382662	G	19930408	(199315)	
US 5202232	A	19930413	(199317)	4
JP 07004267	B2	19950125	(199508)	5

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 8402194	A		WO 1983-US1904	19831201
EP 127681	A		EP 1984-900422	19831201
JP 60500029	W		JP 1984-500553	19831201
EP 127681	B1		WO 1983-US1904	19831201
			EP 1984-900422	19831201
DE 3382662	G		DE 1983-3382662	19831201
			WO 1983-US1904	19831201
			EP 1984-900422	19831201
US 5202232	A	CIP of	US 1982-446319	19821202
		Cont of	US 1986-829708	19860213
		Cont of	US 1988-217822	19880712
			US 1991-759866	19910916
JP 07004267	B2		WO 1983-US1904	19831201
			JP 1984-500553	19831201

FILING DETAILS:

PATENT NO	KIND		PATENT NO
EP 127681	B1	Based on	WO 8402194
DE 3382662	G	Based on	EP 127681
		Based on	WO 8402194
US 5202232	A	Cont of	US 4757134
JP 07004267	B2	Based on	JP 60500029
		Based on	WO 8402194

PRIORITY APPLN. INFO: US 1982-446317 19821202; US 1986-829708 19860213

AN 1984-158728 [25] WPIDS

CR 1988-212845 [30]

AB WO 8402194 A UPAB: 19950306

The separation is from the Streptococcus that will bind to IgA and comprises extrn. of the Streptococci in the log phase with an aqueous medium containing a material to disrupt the bond between the cell surface and the **protein**. A solution containing the **protein** (I) is obtd. and a precipitation agent is added to **recover** (I) as a ppte.

Typically 1-10% Na dodecylsulphate (II) is used at pH 6-9, and EtOH is used for precipitation at 0-10 deg.C. A non-ionic detergent may be similarly used. The extraction may be in an aqueous buffer of 1-10% polyethylene glycol p-isobutylphenyl ether at pH 6-9, or with dilute HCl.

The (I) can be used in the detection of Neisseria **meningitidis**, Haemophilus influenzae and Diplococcus pneumoniae; and of N. gonorrhoea, by its presence in a body fluid, especially by the cleavage of IgA to sub-class IgA1.
0/0
Dwg.0/0

ABEQ EP 127681 B UPAB: 19930925
An IgA binding **protein isolatable** from the surface of Group B streptococci, said **protein** having a **molecular weight** of 132,000 when determined by **sodium dodecyl** sulphate **polyacrylamide gel electrophoresis** and being capable of binding to human IgA by reacting specifically with the Fc portion thereof.
0/0

ABEQ US 5202232 A UPAB: 19931025
Detection of a pathogenic Neisseria **meningitides** or Neisseria gonorrhoeal infection characterised by the presence of an IgA **protein** in a body fluid, comprises (i) exposing an absorbing surface to a soln. of IgA binding **protein** which is characterised as having **mol. wt.** of about 132,000 when determined by **sodium dodecyl** sulphate **polyacrylamide gel electrophoresis**; (ii) reacting specifically with the Fc portion of the human IGA, hydrolysable by protease contg. the following aminoacids in the residue: Asp (158), Glu (204), Ala (62), Ile (52), Phe (27), Thr (81), Pro (57), Met (18), Leu (86), His (26), Arg (19), Ser (58), Gly (37), Val (75), Tyr (23), Lys (158) per 130,000 **mol. wt.** whereby the N-terminal aminoacid sequence Ser-Lys-Leu-Val-Lys-Asp-Lys-Leu-Val-Lys-Thr-Lys-Glu (as determined by Edman degradation), and the reaction is conducted at pH 6-11 at ambient temp. to coat the absorbing surface with the binding **protein**; (iii) washing the surface with aq. isotonic sodium chloride soln. contg. nonionic detergent; (iv) exposing the surface to aq. soln. of IgA at concn. of 0.2-250 micro-g/ml at pH 5-10 to bind the IgA to the binding **protein**; (v) incubating a secretory fluid from the suspected mammal for 15 minutes to 4 hrs. at ambient temp.; (vi) washing as before; (vii) incubating with alkaline phosphate conjugated anti-human light chain serum for at least 30 minutes at ambient temp., then washing; (viii) incubating with p-nitrophenol phosphate in a buffer at pH of at least 7 for 5-60 minutes at ambient temp., then (ix) determining the optical density of the resulting medium at 405 nm.
USE - Method can be used to determine the concn. of IgA in serum or in secretion; used as a detection system for the presence of gonorrhea; used to determine presence of bacterial meningitis caused by Dipolococcus, pneumonia, Haemophilus influencae and Neisseria; used to determine specific reactivity of antibodies of the IgA class; and used to determine sub-classes IgA1 and IgA2 of the IgA antibodies.
Dwg.0/0

L18 ANSWER 30 OF 39 EMBASE
ACCESSION NUMBER: 84060576 EMBASE
DOCUMENT NUMBER: 1984060576
TITLE: Immunoglobulin A protease activity of Ureaplasma urealyticum.
AUTHOR: Robertson J.A.; Stemler M.E.; Stemke G.W.
CORPORATE SOURCE: Department of Medical Microbiology, University of Alberta, Edmonton, Alberta T6G 2H7, Canada
SOURCE: Journal of Clinical Microbiology, (1984) Vol. 19, No. 2, pp. 255-258.

CODEN: JCMIDW
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
013 Dermatology and Venereology
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Dec 1991
Last Updated on STN: 10 Dec 1991

AB All of 14 serotype standards and 34 of 35 wild-type strains of Ureaplasma urealyticum **isolated** from humans demonstrated an immunoglobulin A (IgA) protease activity. This activity degraded radiolabeled human IgA including IgA1 but not IgG or azocasein. The IgA fragments were detected by **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis**, followed by radioautography, and they had **molecular weights** of about 110,000 and 50,000. The IgA protease activity persisted in 25 mM EDTA but was sensitive to trypsin; it was presumed to be **protein.** This is the fourth microbial genus and the first mycoplasma species in which an IgA protease activity has been identified. Such activity was absent in Mycoplasma pneumoniae, Mycoplasma hominis, and Acholeplasma laidlawii.

L18 ANSWER 31 OF 39 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 83154989 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6403211
TITLE: Serotypes of Neisseria **meningitidis** associated with an increased incidence of meningitis cases in the Hamilton area, Ontario, during 1978 and 1979.
AUTHOR: Ashton F E; Ryan J A; Jones C; Brodeur B R; Diena B B
SOURCE: Canadian journal of microbiology, (1983 Jan) Vol. 29, No. 1, pp. 129-36.
Journal code: 0372707. ISSN: 0008-4166.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198305
ENTRY DATE: Entered STN: 18 Mar 1990
Last Updated on STN: 18 Mar 1990
Entered Medline: 27 May 1983

AB The distribution of serotypes among strains of Neisseria **meningitidis** responsible for a marked increase of meningitis cases in the Hamilton area, Ontario, in 1978 and 1979 was determined. Twenty-six serogroup B and two serogroup W135 strains **isolated** from cerebrospinal fluid, blood, and skin of 28 patients were serotyped by agar gel double diffusion. Twenty-one (81%) of the group B strains were serotype 2b as judged by the formation of characteristic serotype precipitin bands with the specific anti-2996 (type 2b) serum. Fourteen of the serotype 2b strains also reacted with anti-77252 serum, which suggested that one strain or several closely related strains were mainly responsible for the increase in meningitis during the 2-year period. Examination of the outer membrane complexes (OMC) of the strains by polyacrylamide **gel electrophoresis** in the presence of **sodium dodecyl** sulfate (**SDS-PAGE**) revealed that all 21 of the serotype 2b strains contained the class 2 **protein** (**molecular weight** 41500) which is known to be the site of the serotype 2b determinant. Further

characterization of the serotype 2b, 77252 strains by enzyme-linked immunosorbent assays (ELISA) and **SDS-PAGE** suggested that the 77252 determinant was present in the class 1 **proteins** of these strains. The serotype 2b containing strains were **isolated** from 77.7 and 70% of males and females, respectively, from 81.8% of children less than 5 years of age, and from 75.0% of patients of all age groups. The study indicates the important role of serotype 2b **meningococci** in causing the increased incidence of meningitis and further substantiates the important association of the serotype 2b determinant with group B serotype 2 **meningococcal** disease in Canada.

L18 ANSWER 32 OF 39 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 81166952 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6783544
TITLE: Energy-independent uptake of iron from citrate by **isolated** outer membranes of Neisseria **meningitidis.**
AUTHOR: Simonson C; Trivett T; DeVoe I W
SOURCE: Infection and immunity, (1981 Feb) Vol. 31, No. 2, pp. 547-53.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198106
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 18 Dec 2002
Entered Medline: 13 Jun 1981

AB Cyanide-poisoned Neisseria **meningitidis** SD1C cells rapidly took up 55Fe from iron-citrate complexes during the first 2 min, after which no further iron was accumulated. [14C]citrate was not taken up concomitantly with 55Fe by these cells. The 55Fe taken up by the poisoned cells was found in the membrane fraction after cells were broken; 70% of the radioactivity was distributed in the outer membrane, and 30% was in the inner membrane. **Isolated** outer membranes from iron-starved cells were as capable of iron uptake from citrate as intact cells were. As with whole cells, [14C]citrate was not taken up by **isolated** outer membranes. A polyacrylamide **gel electrophoresis** analysis of the **proteins** from citrate-dialyzed outer membranes after the uptake of 55Fe revealed that the radioactivity was associated with a major band of 36,500 **molecular weight.**

L18 ANSWER 33 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1981:284191 BIOSIS
DOCUMENT NUMBER: PREV198172069175; BA72:69175
TITLE: 5 STRUCTURAL CLASSES OF MAJOR OUTER **PROTEINS** IN NEISSERIA-**MENINGITIDIS.**
AUTHOR(S): TSAI C-M [Reprint author]; FRASCH C E; MOCCA L F
CORPORATE SOURCE: DIV OF BACTERIAL PRODUCTS, BUREAU OF BIOLOGICS, FOOD AND DRUG ADMINISTRATION, BETHESDA, MARYLAND 20205, USA
SOURCE: Journal of Bacteriology, (1981) Vol. 146, No. 1, pp. 69-78.
CODEN: JOBAAY. ISSN: 0021-9193.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Group B N. **meningitidis** is subdivided into 15 **protein** serotypes based on antigenically different major outer membrane **proteins.** Most serotypes have 3 or 4 major **proteins** in their outer membranes. Comparative structural analysis by chymotryptic 125I-**peptide** mapping was performed on these major **proteins** from the prototype strains and from 6 non-serotypable strains. The major outer membrane **proteins** from each of the serotypes were separated by **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** using the Laemmli system. Individual **proteins** within the gel slices were radioiodinated and digested with chymotrypsin, and then their 125I-**peptides** were separated by electrophoresis and chromatography on cellulose thin-layer plates. The **peptide** maps obtained by autoradiography were categorized into 5 different structural classes which correlated with the apparent **MW** of **proteins**, i.e., 46 ± 1K [**kilodaltons**], 41 ± 1K, 38 ± 1K, 33 ± 1K and 28 ± 1K. Each major outer membrane **protein** within a strain had a distinctly different chymotryptic **peptide** map, indicating significant differences in the primary structure of these **proteins.** Outer membrane **proteins** of the same or very similar **MW** from different serotype strains had similar, occasionally identical **peptide** maps, indicating a high degree of structural homology. The unique **peptides** from **proteins** of the same structural classes were often hydrophilic; common **peptides** were often hydrophobic. The serotype determinants apparently reside within the variable hydrophilic regions of major outer membrane **proteins.**

L18 ANSWER 34 OF 39 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 81263050 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6790443
TITLE: Increased virulence of Neisseria **meningitidis** after in vitro iron-limited growth at low pH.
AUTHOR: Brener D; DeVoe I W; Holbein B E
SOURCE: Infection and immunity, (1981 Jul) Vol. 33, No. 1, pp. 59-66.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198110
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 25 Oct 1981

AB At low pH (6.6) and under conditions of iron limitation, Neisseria **meningitidis** group B (strain SD1C) exhibited an atypical outer membrane **protein** profile and an increased relative virulence for the mouse. Cells grown in a buffered medium were effectively deprived of iron by the addition of ethylenediamine-diorthohydroxyphenylacetate. The pH of the medium selected for characteristic colonial morphologies: type M3 predominated at pH 6.6, and type M5 predominated at pH 7.7. A mixed population of M1, M3, and M5 colonies was observed at pH 7.2. **Isolated** outer membrane **proteins** were analyzed by **sodium dodecyl** 99 99 sulfate-**polyacrylamide gel electrophoresis**, and surface exposed **proteins** were labeled by the [125I]lactoperoxidase method and subsequently

identified by autoradiography. Cells grown at pH 6.6 elaborated a major outer membrane **protein** (**protein** III; **molecular weight**, 69,000), which was also present in the outer membrane of iron-limited cells grown at pH 7.2. At pH 7.2 in an iron-sufficient medium, **protein** III was present only in small quantities in sodium dodecyl sulfate-polyacrylamide gel was present only in small quantities in **sodium dodecyl sulfate-polyacrylamide gel electrophoresis** gels. A study of the relative virulence (50% lethal dose) of the **meningococcus** for C57/BL mice revealed that iron-limited cells grown at low pH had an increased relative virulence 1,200-fold (50% lethal dose, 4.0 CFU) greater than that of cells grown in the same medium but at pH 7.2 and with sufficient iron. These studies indicate that pH and iron can be important factors in the determination of **meningococcal** virulence.

L18 ANSWER 35 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 8
ACCESSION NUMBER: 1981:190438 BIOSIS
DOCUMENT NUMBER: PREV198171060430; BA71:60430
TITLE: VARIABILITY OF LOW **MOLECULAR WEIGHT** HEAT MODIFIABLE OUTER MEMBRANE **PROTEINS** OF NEISSERIA-**MENINGITIDIS**.
AUTHOR(S): POOLMAN J T [Reprint author]; DE MARIE S; ZANEN H C
CORPORATE SOURCE: LAB GEZONDHEIDSLEER, UNIV AMSTERDAM, MAURITSKADE 57, 1092 AD AMSTERDAM, NETH
SOURCE: Infection and Immunity, (1980) Vol. 30, No. 3, pp. 642-648.
CODEN: INFIBR. ISSN: 0019-9567.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Analysis of major outer membrane **protein** (MOMP) profiles of various **meningococci** by **sodium dodecyl sulfate** (**SDS**)-**polyacrylamide gel electrophoresis** (**SDS-PAGE**) revealed the presence of 0-2 low **MW**, heat-modifiable MOMP (**MW**, 25,000-32,000) and 1-3 high **MW** MOMP (**MW**, 32,000-46,000). Heat modifiability was investigated by comparing MOMP profiles after heating in SDS solutions at 100° C for 5 min or at 40° C for 1 h. Low **MW** MOMP shifted to higher apparent **MW** after being heated at 100° C. Heat modifiability of high **MW** MOMP varied among strains; whenever modified these **proteins** shifted to lower apparent **MW** after complete denaturation. Variability of low **MW**, heat-modifiable MOMP was demonstrated when MOMP profiles were compared of **isolates** from index cases and associated cases and carriers among contacts, different **isolates** from the same individual, and **isolates** from a small epidemic caused by serogroup W-135. In some cases high **MW** MOMP revealed quantitative differences among related strains. The observed variability and quantitative differences indicate that MOMP serotyping and typing on the basis of **SDS-PAGE** profiles (**PAGE** typing) need careful reevaluation.

L18 ANSWER 36 OF 39 MEDLINE on STN
ACCESSION NUMBER: 81045444 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6253375
TITLE: **Isolation** and characterization of acylneuraminate cytidylyltransferase from frog liver.

AUTHOR: Schauer R; Haverkamp J; Ehrlich K
SOURCE: Hoppe-Seyler's Zeitschrift fur physiologische Chemie, (1980 May) Vol. 361, No. 5, pp. 641-8.
Journal code: 2985060R. ISSN: 0018-4888.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198101
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 6 Feb 1998
Entered Medline: 29 Jan 1981

AB Frog liver (Rana esculenta) is a rich source of acylneuraminate cytidylyltransferase. The soluble enzyme was purified 250-fold almost to purity with 25% yield and a specific activity of 9 mkat/kg **protein** (0.54 U/mg **protein**) using DEAE Sephadex and Sepharose 6B chromatography, followed by preparative polyacrylamide **gel electrophoresis**. The **molecular weight** of the cytidylyltransferase was determined to be 163 000 with the aid of Sepharose 6B chromatography and **gel electrophoresis**, with or without dodecyl sulphate or urea. No subunits were found. The isoelectric point of the enzyme is at pH 6. Optimum reaction rate was observed at pH 9, 37 degrees C, 50mM Mg2 or Ca2 and ImM mercaptoethanol. The Km values for N-acetylneuraminic acid, N-glycoloylneuraminic acid and CTP are 1.6mM, 2.3 mM and 0.6mM, respectively. O-Acetylated sialic acids are inactive with the cytidylyltransferase from frog liver. Enzyme activity can be inhibited by SH reagents and CMP (Ki = 0.5mM).

L18 ANSWER 37 OF 39 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 80183991 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6768838
TITLE: Immunochemical characterization of Neisseria **meningitidis** serotype antigens by immunodiffusion and **SDS-polyacrylamide gel electrophoresis** immunoperoxidase techniques and the distribution of serotypes among cases and carriers.
AUTHOR: Poolman J T; Hopman C T; Zanen H C
SOURCE: Journal of general microbiology, (1980 Feb) Vol. 116, No. 2, pp. 465-73.
Journal code: 0375371. ISSN: 0022-1287.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198007
ENTRY DATE: Entered STN: 15 Mar 1990
Last Updated on STN: 15 Mar 1990
Entered Medline: 12 Jul 1980

AB The chemical nature of the antigens of the **meningococcal** serotypes described by Frasch and colleagues was determined by a combination of immunodiffusion and the **SDS-polyacrylamide gel electrophoresis** immunoperoxidase technique (SGIP). It was confirmed that the serotype antigens of the outer membrane of serotypes 1, 2, 6, 9, 11 and 12 were **proteins**, whilst those of serotypes 4,5 and 8 were lipopolysaccharides. Serotype 2 can now be divided into three related types, provisionally called 2a (originally serotype 2), 2b and 2c with the specific antigens being **proteins** having

molecular weights of 41,000, 41,500 and 41,500, respectively. A total of 195 strains of **meningococci** **isolated** from patients and carriers in the Netherlands and 20 serogroup Y strains from patients in the U.S.A. were serotyped by means of immunodiffusion. Serotype 2a could be demonstrated in some strains belonging to the serogroups B (only those from carriers), C, W-135 and Y (only those from the U.S.A.). The W-135 strains **isolated** from patients in this series more often belonged to serotype 2a than did the W-135 strains from carriers. Serotype 2b was present in about half of the serogroup B and a few serogroup C strains **isolated** from patients with meningitis, but absent in serogroup B and C strains from carriers. Serotype 2c could only be demonstrated in serogroup Y strains, both from the Netherlands and the U.S.A. The other serotypes were found only sporadically.

L18 ANSWER 38 OF 39 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 77186975 MEDLINE
DOCUMENT NUMBER: PubMed ID: 405327
TITLE: Homogeneity of **protein** serotype antigens in Neisseria **meningitidis** group A.
AUTHOR: Sippel J E; Quan A
SOURCE: Infection and immunity, (1977 May) Vol. 16, No. 2, pp. 623-7.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197707
ENTRY DATE: Entered STN: 14 Mar 1990
Last Updated on STN: 14 Mar 1990
Entered Medline: 29 Jul 1977

AB Serotype antigens (STA), which have been shown to be constituents of outer-membrane **protein**, were extracted from group A **meningococci** with 0.2 M LiCl and pelleted by centrifugation at 150,000 X g. The STAs from 100 group A strains, which had been **isolated** from cases and carriers in various geographical locations, were compared by **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** (**SDS-PAGE**). Every STA produced three major **protein** bands with **molecular weights** of approximately 35,000, 39,000, and 45,000, respectively. This **SDS-PAGE** pattern is clearly distinct from that produced by the serotype of group B and C **meningococci** most commonly **isolated** from cases (group B type 2 and group C type 2). The group A STAs were also indistinguishable by immunodiffusion. However, differences in bactericidal reactions were demonstrated, suggesting that there are other antigens that play a role in antibody response.

L18 ANSWER 39 OF 39 EMBASE
ACCESSION NUMBER: 75073783 EMBASE
DOCUMENT NUMBER: 1975073783
TITLE: An outer membrane **protein** of Neisseria **meningitidis** group B responsible for serotype specificity.
AUTHOR: Frasch C.E.; Gotschlich E.C.
CORPORATE SOURCE: Rockefeller Univ., New York, N.Y. 10021, United States
SOURCE: Journal of Experimental Medicine, (1974) Vol. 140, No.

1, pp. 87-104.
CODEN: JEMEAV
DOCUMENT TYPE: Journal
FILE SEGMENT: 026 Immunology, Serology and Transplantation
004 Microbiology
LANGUAGE: English
AB **Meningococcal** groups B and C have been subdivided into a series of serotypes based upon the antigenic specificity of **protein** serotype antigens (STA). The purpose of these studies was to obtain the STA by gentle methods and determine its anatomic location in the **meningococcal** cell. The STA was extracted from group B **meningococcal** strains by either 0.2 M LiCl or 0.2 M CaCl2 and **isolated** from the extracts by gel filtration on Sepharose 6B or by pelleting the STA by centrifugation at 100,000 g. The **isolated** STA was a lipoprotein lipopolysaccharide complex with a **mol wt** of approximately 4 x 106 daltons. Antisera prepared against the type 2 STA were bactericidal only for homologous serotype strains. The STA proved to be a constituent of the outer membrane of the cell envelope. This was shown by **SDS polyacrylamide gel electrophoresis (PAGE)** of the **isolated** outer membrane and of the purified STA. The type 2 STA complex contains three principal **proteins**, one of which is predominant with a **mol wt** of 41,000 daltons. The type 2 STA was dissociated by Triton X-100 and separated by sucrose gradient isodensity centrifugation into two peaks. The denser peak (p = 1.26 g/cm3) contained the majority of the 41,000 dalton major outer membrane **protein** as shown by **SDS-PAGE**. This peak also contained the type 2 antigenic determinant. Thus the major outer membrane **protein**, extracted as part of a lipoprotein lipopolysaccharide complex, contains the type 2 STA determinant.

(FILE 'HCAPLUS' ENTERED AT 14:54:54 ON 21 SEP 2006)
L1 64938 SEA FILE=HCAPLUS ABB=ON PLU=ON ((NA OR SODIUM)(W)DODECYL OR SDS)(5W)(PAGE OR (POLYACRYL? OR POLY ACRYL?)(3W)ELECTROPHOR?)
L2 105556 SEA FILE=HCAPLUS ABB=ON PLU=ON GEL ELECTROPHOR?
L3 147559 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L2
L19 1779 SEA FILE=HCAPLUS ABB=ON PLU=ON (PROTEIN OR POLYPROTEIN OR POLYPEPTIDE OR PEPTIDE)(S)(MENINGITID? OR MENINGOCOCC?)
L20 56 SEA FILE=HCAPLUS ABB=ON PLU=ON L3(L)L19
L21 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L20(L)(ISOL? OR RECOVER?)

L22 12 L21 NOT L11

L22 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 14 Mar 2005
ACCESSION NUMBER: 2005:222931 HCAPLUS
DOCUMENT NUMBER: 143:303571
TITLE: Stability of PorA during a meningococcal disease epidemic
AUTHOR(S): Devoy, A. F.; Dyet, K. H.; Martin, D. R.
CORPORATE SOURCE: Communicable Disease Group, Institute of Environmental Science and Research, Porirua, N. Z.
SOURCE: Journal of Clinical Microbiology (2005), 43(2), 832-837
CODEN: JCMIDW; ISSN: 0095-1137
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Meningococci causing New Zealand's epidemic, which began in 1991, are defined as group B, serosubtype P1.4 (subtype P1.7-2,4), belonging to the ST-41/ST-44 complex, lineage III. Of the 2358 group B **isolates** obtained from disease cases from 1991 through 2003, 85.7% (2021 of 2358) were determined to be serosubtype P1.4. Of the remaining **isolates**, 156 (6.6%) were not serosubtypeable (NST). Mol. anal. of the porA gene from these B:NST meningococcal **isolates** was used to determine the reason. Most NST **isolates** (156, 88.5%) expressed a PorA that was distinct from P1.7-2,4 PorA. Fifteen **isolates** expressed variants of P1.7-2,4 PorA, and a further three expressed P1.7-2,4 PorA without any sequence variation. These three **isolates** expressed P1.7-2,4 PorA at very low levels, as determined by **SDS-PAGE** anal., and showed variation in the porA promoter region. Among the 15 meningococcal **isolates** expressing variants of P1.7-2,4 PorA, 11 different sequence variations were found. Compared with the P1.7-2,4 PorA sequence, the sequences of these variants contained deletions, insertions, or single-nucleotide substitutions in the VR2 region of the protein. Multilocus restriction typing was used to assess the clonal derivations of B:NST case **isolates.** **Meningococcal isolates** expressing distinct PorA **proteins** belonged mostly to clonal types that were unrelated to the epidemic strain, whereas all **meningococcal isolates** expressing variants of P1.7-2,4 PorA belonged to the ST-41/ST-44 complex, lineage III. These results, together with those obtained serol., demonstrate that the P1.7-2,4 PorA **protein** of **meningococci** responsible for New Zealand's epidemic has remained relatively stable over 13 years and support the use of a strain-specific outer membrane vesicle vaccine to control the epidemic.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 26 Oct 2004

ACCESSION NUMBER: 2004:888433 HCAPLUS

DOCUMENT NUMBER: 142:3192

TITLE: Proteome analysis of Neisseria meningitidis serogroup A

AUTHOR(S): Bernardini, Giulia; Renzone, Giovanni; Comanducci, Maurizio; Mini, Roberta; Arena, Simona; D'Ambrosio, Chiara; Bambini, Stefania; Trabalzini, Lorenza; Grandi, Guido; Martelli, Paola; Achtman, Mark; Scaloni, Andrea; Ratti, Giulio; Santucci, Annalisa

CORPORATE SOURCE: Dipartimento di Biologia Molecolare, Universita degli Studi di Siena, Siena, Italy

SOURCE: Proteomics (2004), 4(10), 2893-2926
CODEN: PROTC7; ISSN: 1615-9853

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Neisseria meningitidis is an encapsulated Gram-neg. bacterium responsible for significant morbidity and mortality worldwide. Meningococci are opportunistic pathogens, carried in the nasopharynx of approx. 10% of asymptomatic adults. Occasionally, they enter the bloodstream to cause septicemia and meningitis. Meningococci are classified into serogroups on the basis of polysaccharide capsule

diversity, and serogroup A strains have caused major epidemics mainly in the developing world. Here, the authors describe a two-dimensional **gel electrophoresis** protein map of the serogroup A strain Z4970, a clin. **isolate** classified as ancestral to several pandemic waves. This is the first systematically annotated proteomic map for N. meningitidis. Total protein samples from bacteria grown on GC-agar were electrophoretically separated, and protein species were identified by matrix-assisted laser desorption/ionization time of flight spectrometry. The authors identified the products of 273 genes, covering several functional classes, including 94 proteins so far considered as hypothetical. They also also describe several **protein** species encoded by genes reported by DNA microarray studies as being regulated in physiol. conditions which are relevant to natural **meningococcal** pathogenicity. Since menA differs from other serogroups by having a fairly stable clonal population structure (i.e., with a low degree of variability), the authors envisage comparative mapping as a useful tool for microevolution studies, in conjunction with established genotyping methods. As a proof of principle, they performed a comparative anal. on the B subunit of the meningococcal transferrin receptor, a vaccine candidate encoded by the tbpB gene, and a known marker of population diversity in meningococci. The results show that TbpB spot pattern variation observed in the maps of nine clin. **isolates** from diverse epidemic spreads fits previous analyses based on allelic variations of the tbpB gene.

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 26 Apr 1999
ACCESSION NUMBER: 1999:251479 HCAPLUS
DOCUMENT NUMBER: 131:63365
TITLE: Preformulation study of the vaccine candidate P64k against Neisseria meningitidis
AUTHOR(S): Raya, Nestor Exposito; Luaces, Marissa Mestre; Rodriguez, Ricardo Silva; Galvez, Consuelo Nazabal; Rivero, Maxlenin Pena; De la Puente, Nieves Martinez; Batista, Milagros Font; Nieto, Gerardo Guillen
CORPORATE SOURCE: Division de Formulacion y Envase, Centro de Ingenieria Genetica y Biotecnologia, Havana, 10600, Cuba
SOURCE: Biotechnology and Applied Biochemistry (1999), 29(2), 113-117
CODEN: BABIEC; ISSN: 0885-4513
PUBLISHER: Portland Press Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We have previously **isolated**, cloned and expressed in Escherichia coli the lpdA gene coding for a high-mol.-mass **protein** (P64k) common to many **meningococcal** strains. P64k is an outer membrane lipoamide dehydrogenase that is highly immunogenic in animals. Here we describe a preformulation study of the recombinant **protein** as a vaccine candidate against Neisseria **meningitidis**, in which six variants containing the candidate were tested. Three assays were used to identify the most suitable variant for further evaluation: percentage of adsorption, identification of P64k by **SDS/PAGE**, and immunogenicity in mice. All the preformulation variants studied

showed more than 98% of adsorption of P64k on the aluminum gel. After desorption, P64k was also identified by **SDS/PAGE** in the six preformulation variants. Seroconversion was attained in all groups analyzed. On the basis of these results, the most effective variant consisted of 20 μg/mL P64k plus 0.5 mg/mL aluminum hydroxide.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 30 Apr 1994
ACCESSION NUMBER: 1994:212174 HCAPLUS
DOCUMENT NUMBER: 120:212174
TITLE: The complex formation of influenza virus envelope glycoproteins with outer membrane proteins of Neisseria meningitidis or Borrelia burgdorferi
AUTHOR(S): Slavik, I.; Pristasova, S.; Visacka, E.; Slavikova, K.; Matoska, J.; Toman, R.; Klockmann, U.
CORPORATE SOURCE: Inst. Virol., Slov. Acad. Sci., Bratislava, 842 46, Slovakia
SOURCE: Acta Virologica (English Edition) (1993), 37(6), 449-58
CODEN: AVIRA2; ISSN: 0001-723X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **isolation** of influenza virus envelope glycoproteins was achieved by a one-step procedure consisting of treatment of purified virus with zwitterionic detergent and separation of viral constituents by sucrose d. gradient centrifugation. Viral glycoproteins and **proteins** of the outer membrane of N. **meningitidis** or B. burgdorferi formed complexes after removal of the detergent by dialysis. Complexing of viral glycoproteins and bacterial proteins was monitored by gel chromatog. on Sepharose 6B, polyacrylamide **gel electrophoresis** and electron microscopy. It was demonstrated by immunoblot anal. that virus-spirochete complexes elicited formation of antibodies in mice directed against ospA and ospB of spirochetes, as well as against viral glycoproteins, resp.

L22 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 08 Aug 1992
ACCESSION NUMBER: 1992:444186 HCAPLUS
DOCUMENT NUMBER: 117:44186
TITLE: Common antigenic domains in transferrin-binding protein 2 of Neisseria meningitidis, Neisseria gonorrhoeae, and Haemophilus influenzae type b
AUTHOR(S): Stevenson, Pauline; Williams, Paul; Griffiths, Elwyn
CORPORATE SOURCE: Natl. Inst. Biol. Stand. Control, Potters Bar/Hertfordshire, EN6 3QG, UK
SOURCE: Infection and Immunity (1992), 60(6), 2391-6
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB There is now considerable evidence to show that in the Neisseria and Haemophilus species, membrane receptors specific for either transferrin or lactoferrin are involved in the acquisition of iron from these glycoproteins. In Neisseria **meningitidis**, the transferrin receptor appears to consist of two **proteins**, one

of which (TBP 1) has an Mr of 95,000 and the other of which (TBP 2) has an Mr ranging from 68,000 to 85,000, depending on the strain; TBP 2 binds transferrin after **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** and electroblotting, but TBP 1 does not do so. Previous work with polyclonal antibodies raised in mice with whole cells of iron-restricted N. meningitidis showed that the meningococcal TBP 2 exhibits considerable antigenic heterogeneity. Here, the authors report that antiserum against purified TBP 2 from one strain of N. meningitidis cross-reacts on immunoblotting with the TBP 2 of all meningococcal **isolates** examined, as well as with the TBP 2 of N. gonorrhoeae. This antiserum also cross-reacted with the TBP 2 of several strains of H. influenzae type b, thus showing the presence of common antigenic domains among these functionally equivalent proteins in different pathogens; no cross-reaction was detected with a purified sample of the human transferrin receptor.

L22 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 03 May 1992
ACCESSION NUMBER: 1992:167789 HCAPLUS
DOCUMENT NUMBER: 116:167789
TITLE: Role of horizontal genetic exchange in the antigenic variation of the class 1 outer membrane protein of Neisseria meningitidis
AUTHOR(S): Feavers, I. M.; Heath, A. B.; Bygraves, J. A.; Maiden, M. C. J.
CORPORATE SOURCE: Div. Bacteriol., Natl. Inst. Biol. Stand., Control, Potters Bar/Hertfordshire, EN6 3QG, UK
SOURCE: Molecular Microbiology (1992), 6(4), 489-95
CODEN: MOMIEE; ISSN: 0950-382X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The nucleotide sequences of the genes encoding the class 1 outer membrane **protein** of Neisseria **meningitidis** (PorA) from 15 **meningococcal isolates** have been examined These strains, **isolated** over a number of years, represented a variety of serol. types, clonal groups, and geog. locations. Anal. of the aligned nucleotide sequences showed that the known serol. relationships between these proteins were not necessarily reflected throughout the nucleotide sequences of their genes. The uneven distribution of base substitutions, revealed by a comparison of the informative bases, suggested that these genes possessed a mosaic structure. This structure probably resulted from the horizontal transfer of DNA between strains and would have contributed to both the generation and the spread of novel antigenic variants of the protein. In addition, the nucleotide differences between porA genes from different strains were not consistent with the nucleotide sequence divergence of the whole chromosome, as indicated by pulsed-field **gel electrophoresis** (PFGE) fingerprinting techniques: some strains with divergent PFGE fingerprints shared porA genes with extensive regions of nucleotide sequence identity and, conversely, some strains with similar chromosome structures possessed porA genes with different nucleotide sequences and serol. properties. This suggested that entire genes had been exchanged between strains. Given that the meningococcal class 1 OMP is a major component in novel vaccines, some of which are currently undergoing field trials, the potential of horizontal genetic exchange to generate antigenic diversity has implications for the design of such vaccines.

L22 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 25 Jun 1989
ACCESSION NUMBER: 1989:228422 HCAPLUS
DOCUMENT NUMBER: 110:228422
TITLE: Genetic diversity of penicillin G-resistant Neisseria meningitidis from Spain
AUTHOR(S): Mendelman, Paul M.; Caugant, Dominique A.; Kalaitzoglou, George; Wedege, Elisabeth; Chaffin, Donald O.; Campos, Jose; Saez-Nieto, Juan A.; Vinas, Miguel; Selander, Robert K.
CORPORATE SOURCE: Med. Cent., Child. Hosp., Seattle, WA, 98105, USA
SOURCE: Infection and Immunity (1989), 57(4), 1025-9
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Genotypic and phenotypic diversity among 16 penicillin G-resistant (Penr) **isolates** of N. **meningitidis** **recovered** from human blood or cerebrospinal fluid in Spain was compared with that among 12 penicillin-susceptible (Pens) **isolates** by the use of multilocus enzyme electrophoresis, serotyping, auxotroph testing in chemical defined media, and **SDS -PAGE** of penicillin-binding **proteins** (PBPs). Thirteen distinctive multilocus enzyme genotypes (electrophoretic types [ETs]) were identified among the 28 **isolates.** There was slightly less genetic diversity among the 8 ETs of Penr **isolates** (H = 0.385) than among the 8 ETs of Pensisolates (H = 0.431). Cluster anal. demonstrated 2 distinctive complexes of ETs and 1 ET that was not closely related to either complex. The possibility of a singular clonal origin of penicillin G-resistant **isolates** was excluded by the observations that resistance occurred in **isolates** of each of the 2 distantly related complexes of ETs, that 3 of the 4 ETs represented by multiple **isolates** included both susceptible and resistant strains, and that serotypes and growth requirements were not associated with the resistance phenotype. The 28 **isolates** showed a relatively homogeneous pattern of 4 PBPs, with apparently reduced penicillin G binding by PBP 3 of the Penr **isolates.**

L22 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 17 Mar 1989
ACCESSION NUMBER: 1989:93206 HCAPLUS
DOCUMENT NUMBER: 110:93206
TITLE: Neisseria lactamica and Neisseria meningitidis share lipooligosaccharide epitopes but lack common capsular and class 1, 2, and 3 protein epitopes
AUTHOR(S): Kim, Janice J.; Mandrell, Robert E.; Griffiss, J. M.
CORPORATE SOURCE: Cent. Immunochem., Univ. California, San Francisco, CA, 94143, USA
SOURCE: Infection and Immunity (1989), 57(2), 602-8
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB N. lactamica, a common human pharyngeal commensal, contributes to acquired immunity to N. meningitidis. To define the surface antigens shared between these 2 species, monoclonal antibodies (MAbs) were used to study 35 N. lactamica strains **isolated** in various parts of the world for cross-reactivity with **meningococcal** capsules, outer membrane **proteins**, and lipooligosaccharides (LOS). No N. lactamica strain reacted with MAbs specific for capsular group A, B, C, Y, or W, and the authors were unable to extract capsular

polysaccharide from them. Only 2 of 33 strains reacted weakly with MAbs against class 2 serotype proteins P2b and P2c. None reacted with MAbs specific for **meningococcal** class 1 **protein** P1.2 or P1.16 or class 2/3 serotype **protein** P2a or P15. Most N. lactamica strains (30 of 35) bound ≥1 of 7 LOS-specific MAbs. Two LOS epitopes, defined by MAbs O6B4 and 3F11, that are commonly found on pathogenic Neisseria species were found on 25 of 35 N. lactamica. Anal. by **SDS-PAGE** and immunoblotting showed that the LOS of N. lactamica are composed of multiple components that are phys. and antigenically similar to the LOS of pathogenic Neisseria species. Among 4 other commensal neisserial species, only N. cinerea shared LOS epitopes defined by MAbs O6B4 and 3F11. Previous studies have shown that pharyngeal colonization with N. lactamica induces bactericidal antibodies against the meningococcus. Shared N. lactamica and meningococcal LOS epitopes may play an important role in the development of natural immunity to the meningococcus.

L22 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 19 Sep 1986
ACCESSION NUMBER: 1986:494233 HCAPLUS
DOCUMENT NUMBER: 105:94233
TITLE: An unusual Neisseria isolated from conjunctival cultures in rural Egypt
AUTHOR(S): Mazloum, H.; Totten, P. A.; Brooks, G. F.; Dawson, C. R.; Falkow, S.; James, J. F.; Knapp, J. S.; Koomey, J. M.; Lammel, C. J.; et al.
CORPORATE SOURCE: Dep. Bacteriol., Fac. Med., Alexandria, Egypt
SOURCE: Journal of Infectious Diseases (1986), 154(2), 212-24
CODEN: JIDIAQ; ISSN: 0022-1899
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Seven **isolates** of an unusual Neisseria species were obtained from eye cultures of children in 2 rural Egyptian villages. These Neisseria utilized only glucose, they exhibited a pos. reaction when tested with antisera to crude antigen from N. meningitidis and N. gonorrhoeae, and they did not react with the fluorescent antibody tests for N. gonorrhoeae or with the monoclonal antibodies used to serotype gonococci. The Egyptian **isolates** had colony morphol. more typical of meningococci than gonococci and showed opaque and transparent colony variants. On **SDS-PAGE**, the major outer-membrane **proteins** had different patterns than those noted for comparable **proteins** of **meningococci** and gonococci; heat-modifiable outer-membrane **proteins** were present. Four of the 6 **isolates** examined had cryptic plasmids of 2:8 megadaltons, which were slightly larger than the cryptic plasmid of N. gonorrhoeae. These plasmids were homologous to the gonococcal cryptic plasmid, but had different restriction enzyme fragment patterns. The DNA from the Egyptian **isolates**, like DNA from N. meningitidis but unlike DNA from N. gonorrhoeae, could be cut with the restriction enzzyme HaeIII. The frequency of transformation into a temperature-sensitive mutant of N. gonorrhoeae was 0.2 for the Egyptian **isolates** and 0.1 for N. meningitidis, a frequency that was 5-10-fold lower than that for N. gonorrhoeae control **isolates**. Whole-cell DNA from Egyptian **isolates** showed 68-73% homol. with N. gonorrhoeae and 57-63% with N. meningitidis. On the basis of these observations, the Egyptian **isolates** are distinct from N. meningitidis and may represent a variant of N. gonorrhoeae. The **isolates** may be

called N. gonorrhoeae subspecies kochii.

L22 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1983:177309 HCAPLUS
DOCUMENT NUMBER: 98:177309
TITLE: Preparation and physicochemical and immunological characterization of polysaccharide-outer membrane protein complexes of Neisseria meningitidis
AUTHOR(S): Beuvery, E. Coen; Miedema, Frank; Van Delft, Rob W.; Haverkamp, Johan; Leussink, Albert B.; Te Pas, Ben J.; Teppema, Koos S.; Tiesjema, Rudy H.
CORPORATE SOURCE: Rijksinst. Volksgezondheid, Bilthoven, 3720 BA, Neth.
SOURCE: Infection and Immunity (1983), 40(1), 369-80
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A crude complex containing group C polysaccharide, outer membrane **proteins**, and lipopolysaccharide (LPS) was **isolated** from the cell-free culture liquid of Neisseria **meningitidis** serogroup C, serotype 2a. Group C polysaccharide and LPS were removed from this complex, resulting in an outer membrane complex and a purified complex, resp. Anal. by electron microscopy showed the outer membrane origin of the crude complex and the outer membrane complex, whereas such a structure was absent in the purified complex. **SDS-polyacrylamide gel electrophoresis** patterns of the 3 complexes were identical. Pyrolysis-mass spectrometry data correlated well with those obtained by the biochem. assays and suggested a low LPS content in the purified complex and a low polysaccharide content in the outer membrane complex. The purified complex was nonpyrogenic and could be prepared with the same yield as that of purified polysaccharide. The immunogenic activities of the complexes were studied in mice. The antibodies were measured by the ELISA and the bactericidal antibody assay. All complexes induced IgG antibodies to group C polysaccharide as well as to the serotype antigen, although the removal of polysaccharide and LPS resulted in a reduction of the immunogenic activities of outer membrane complex and purified complex, resp. A second dose of all complexes produced a clear booster effect of both antibody responses. The antibodies were bactericidal.

L22 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1982:523554 HCAPLUS
DOCUMENT NUMBER: 97:123554
TITLE: Sodium dodecyl sulfate-polyacrylamide gel typing system for characterization of Neisseria meningitidis isolates
AUTHOR(S): Mocca, Louis F.; Frasch, Carl E.
CORPORATE SOURCE: Div. Bacterial Prod., FDA, Bethesda, MD, 20205, USA
SOURCE: Journal of Clinical Microbiology (1982), 16(2), 240-4
CODEN: JCMIDW; ISSN: 0095-1137
DOCUMENT TYPE: Journal
LANGUAGE: English
AB About 30-50% of group B and group C N. **meningitidis** carrier **isolates** are not serotypable with existing outer membrane **protein** typing sera. A typing system based on differences in

the outer membrane protein profiles after **SDS-polyacrylamide gel electrophoresis** (**SDS-PAGE**) was therefore developed as an adjunct to existing serotyping methods. Although most N. **meningitidis** strains contain several outer membrane **proteins** visible by **SDS-PAGE**, there are only 1-3 predominant **proteins**. The **SDS-PAGE** profiles of these major proteins were used to establish 10 different PAGE types. More than 95% of all meningococcal **isolates**, regardless of serogroup, fit into 1 of the 10 PAGE types. The outer membrane protein profile of individual strains after **SDS-PAGE** was constant when outer membrane fractions were prepared from the same strain on several different days. A comparison of gel profiles of **meningococcal isolates** obtained from different sites of the same patient revealed no significant differences among both major and minor **proteins** for **isolate** sets thus far examined Characterization of strains by PAGE type can be a valuable epidemiol. tool in addition to serotyping and in the absence of specific serotype antisera.

L22 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1980:443519 HCAPLUS
DOCUMENT NUMBER: 93:43519
TITLE: Detection of antibody activity in human serums against meningococcal cell wall antigens using a gel-immunoradioassay (GIRA)
AUTHOR(S): Poolman, J. T.; Zanen, H. C.
CORPORATE SOURCE: Lab. Hyg., Univ. Amsterdam, Amsterdam, 1092 AD, Neth.
SOURCE: FEMS Microbiology Letters (1980), 7(4), 293-6
CODEN: FMLED7; ISSN: 0378-1097
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The method of W. Von Raamsdonk et al (1977) using **Na dodecyl** sulfate-**polyacrylamide gel electrophoresis**-immuno peroxidase in identification of **meningococcal** cell wall antigens was modified by replacing the peroxidase-labeled anti-IgG by 125I-labeled **protein** A, in order to detect antibody binding by bacterial antigens separated in gels. This method is referred to as GIRA. Serum samples from a patient with meningitis, taken 2 and 16 days after the illness began, were analyzed. The 1st serum sample showed antibody activity against some outer membrane **protein** (OMP) of **meningococcus** (strain 780626, serogroup C) (which was **isolated** from cerebrospinal fluid of this patient and also minor antibody activity against group A and W-135 capsular polysaccharides of reference strains of Neisseria **meningitidis**. The 2nd serum sample showed strong antibody activity against reference materials and the lipopolysaccharide of strain 780626.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, PHIC, PHIN, TOXCENTER, PASCAL, DISSABS' ENTERED AT 14:56:20 ON 21 SEP 2006)
L23 68 S L21
L24 53 S L23 NOT L17
L25 25 DUP REM L24 (28 DUPLICATES REMOVED)

L25 ANSWER 1 OF 25 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2005066681 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15695688

TITLE: Stability of PorA during a meningococcal disease epidemic.
AUTHOR: Devoy A F; Dyet K H; Martin D R
CORPORATE SOURCE: Communicable Disease Group, Institute of Environmental Science and Research, Porirua, New Zealand.
SOURCE: Journal of clinical microbiology, (2005 Feb) Vol. 43, No. 2, pp. 832-7.
Journal code: 7505564. ISSN: 0095-1137.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AY653178
ENTRY MONTH: 200506
ENTRY DATE: Entered STN: 8 Feb 2005
Last Updated on STN: 21 Jun 2005
Entered Medline: 20 Jun 2005

AB Meningococci causing New Zealand's epidemic, which began in 1991, are defined as group B, serosubtype P1.4 (subtype P1.7-2,4), belonging to the ST-41/ST-44 complex, lineage III. Of the 2,358 group B **isolates** obtained from disease cases from 1991 through 2003, 85.7% (2,021 of 2,358) were determined to be serosubtype P1.4. Of the remaining **isolates**, 156 (6.6%) were not serosubtypeable (NST). Molecular analysis of the porA gene from these B:NST meningococcal **isolates** was used to determine the reason. Most NST **isolates** (156, 88.5%) expressed a PorA that was distinct from P1.7-2,4 PorA. Fifteen **isolates** expressed variants of P1.7-2,4 PorA, and a further three expressed P1.7-2,4 PorA without any sequence variation. These three **isolates** expressed P1.7-2,4 PorA at very low levels, as determined by **sodium dodecyl** sulfate-**polyacrylamide** **gel electrophoresis** analysis, and showed variation in the porA promoter region. Among the 15 meningococcal **isolates** expressing variants of P1.7-2,4 PorA, 11 different sequence variations were found. Compared with the P1.7-2,4 PorA sequence, the sequences of these variants contained deletions, insertions, or single-nucleotide substitutions in the VR2 region of the protein. Multilocus restriction typing was used to assess the clonal derivations of B:NST case **isolates.** **Meningococcal isolates** expressing distinct PorA **proteins** belonged mostly to clonal types that were unrelated to the epidemic strain, whereas all **meningococcal** **isolates** expressing variants of P1.7-2,4 PorA belonged to the ST-41/ST-44 complex, lineage III. These results, together with those obtained serologically, demonstrate that the P1.7-2,4 PorA **protein** of **meningococci** responsible for New Zealand's epidemic has remained relatively stable over 13 years and support the use of a strain-specific outer membrane vesicle vaccine to control the epidemic.

L25 ANSWER 2 OF 25 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2004513570 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15378741
TITLE: Proteome analysis of Neisseria meningitidis serogroup A.
AUTHOR: Bernardini Giulia; Renzone Giovanni; Comanducci Maurizio; Mini Roberta; Arena Simona; D'Ambrosio Chiara; Bambini Stefania; Trabalzini Lorenza; Grandi Guido; Martelli Paola; Achtman Mark; Scaloni Andrea; Ratti Giulio; Santucci Annalisa

CORPORATE SOURCE: Dipartimento di Biologia Molecolare, Universita degli Studi di Siena, Siena, Italy.
SOURCE: Proteomics, (2004 Oct) Vol. 4, No. 10, pp. 2893-926. Journal code: 101092707. ISSN: 1615-9853.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200503
ENTRY DATE: Entered STN: 15 Oct 2004
Last Updated on STN: 3 Mar 2005
Entered Medline: 2 Mar 2005

AB Neisseria meningitidis is an encapsulated Gram-negative bacterium responsible for significant morbidity and mortality worldwide. Meningococci are opportunistic pathogens, carried in the nasopharynx of approximately 10% of asymptomatic adults. Occasionally they enter the bloodstream to cause septicaemia and meningitis. Meningococci are classified into serogroups on the basis of polysaccharide capsule diversity, and serogroup A strains have caused major epidemics mainly in the developing world. Here we describe a two-dimensional **gel electrophoresis** protein map of the serogroup A strain Z4970, a clinical **isolate** classified as ancestral to several pandemic waves. To our knowledge this is the first systematically annotated proteomic map for N. meningitidis. Total protein samples from bacteria grown on GC-agar were electrophoretically separated and protein species were identified by matrix-assisted laser desorption/ionization time of flight spectrometry. We identified the products of 273 genes, covering several functional classes, including 94 proteins so far considered as hypothetical. We also describe several **protein** species encoded by genes reported by DNA microarray studies as being regulated in physiological conditions which are relevant to natural **meningococcal** pathogenicity. Since menA differs from other serogroups by having a fairly stable clonal population structure (i.e. with a low degree of variability), we envisaged comparative mapping as a useful tool for microevolution studies, in conjunction with established genotyping methods. As a proof of principle, we performed a comparative analysis on the B subunit of the meningococcal transferrin receptor, a vaccine candidate encoded by the tbpB gene, and a known marker of population diversity in meningococci. The results show that TbpB spot pattern variation observed in the maps of nine clinical **isolates** from diverse epidemic spreads, fits previous analyses based on allelic variations of the tbpB gene.

L25 ANSWER 3 OF 25 PASCAL COPYRIGHT 2006 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2004-0213729 PASCAL

TITLE (IN ENGLISH): GNA33 of Neisseria meningitidis is a lipoprotein required for cell separation, membrane architecture, and virulence
AUTHOR: ADU-BOBIE Jeannette; LUPETTI Pietro; BRUNELLI Brunella; GRANOFF Dan; NORAIS Nathalie; FERRARI Germano; GRANDI Guido; RAPPUOLI Rino; PIZZA Mariagrazia
CORPORATE SOURCE: IRIS, Chiron Vaccines, University of Siena, 53100 Siena, Italy; Unit of Electron Microscopy and Cryotechniques, Dipartmento Biologia Evolutiva, University of Siena, 53100 Siena, Italy;

Children's Hospital Oakland Research Institute, Oakland, California 94609, United States
SOURCE: Infection and immunity, (2004), 72(4), 1914-1919, 24 refs.
ISSN: 0019-9567 CODEN: INFIBR
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-15757, 354000111475100080
AN 2004-0213729 PASCAL

AB GNA33 is a membrane-bound lipoprotein with murein hydrolase activity that is present in all Neisseria species and well conserved in different **meningococcal isolates.** The **protein** shows 33% identity to a lytic transglycolase (MltA) from Escherichia coli and has been shown to be involved in the degradation of both insoluble murein sacculi and unsubstituted glycan strands. To study the function of the gene and its role in pathogenesis and virulence, a knockout mutant of a Neisseria **meningitidis** serogroup B strain was generated. The mutant exhibited retarded growth in vitro. Transmission electron microscopy revealed that the mutant grows in clusters which are connected by a continuous outer membrane, suggesting a failure in the separation of daughter cells. Moreover, **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** analysis of culture supernatant revealed that the mutant releases several **proteins** in the medium. The five most abundant **proteins**, identified by matrix-assisted laser desorption ionization-time-of-flight mass spectrometry analysis, belong to the outer membrane **protein** family. Finally, the mutant showed an attenuated phenotype, since it was not able to cause bacteremia in the infant rat model. We conclude that GNA33 is a highly conserved lipoprotein which plays an important role in peptidoglycan metabolism, cell separation, membrane architecture, and virulence.

L25 ANSWER 4 OF 25 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 1999180526 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10080843
TITLE: Preformulation study of the vaccine candidate P64k against Neisseria meningitidis.
AUTHOR: Exposito Raya N; Mestre Luaces M; Silva Rodriguez R; Nazabal Galvez C; Pena Rivero M; Martinez de la Puente N; Font Batista M; Guillen Nieto G
CORPORATE SOURCE: Division de Formulacion y Envase, Centro de Ingenier approximately ia Genetica y Biotecnolog approximately ia, P.O. Box 6162, Cubanacan, Habana 10600, Cuba.
SOURCE: Biotechnology and applied biochemistry, (1999 Apr) Vol. 29 (Pt 2), pp. 113-7.
Journal code: 8609465. ISSN: 0885-4513.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY DATE: Entered STN: 18 Jun 1999
Last Updated on STN: 18 Jun 1999
Entered Medline: 9 Jun 1999
AB We have previously **isolated**, cloned and expressed in Escherichia coli the lpdA gene coding for a high-molecular-mass

protein (P64k) common to many **meningococcal** strains. P64k is an outer membrane lipoamide dehydrogenase that is highly immunogenic in animals. Here we describe a preformulation study of the recombinant **protein** as a vaccine candidate against Neisseria **meningitidis**, in which six variants containing the candidate were tested. Three assays were used to identify the most suitable variant for further evaluation: percentage of adsorption, identification of P64k by **SDS/PAGE**, and immunogenicity in mice. All the preformulation variants studied showed more than 98% of adsorption of P64k on the aluminium gel. After desorption, P64k was also identified by **SDS/PAGE** in the six preformulation variants. Seroconversion was attained in all groups analysed. On the basis of these results, the most effective variant consisted of 20 microg/ml P64k plus 0.5 mg/ml aluminium hydroxide.

L25 ANSWER 5 OF 25 PASCAL COPYRIGHT 2006 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1999-0209086 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 1999 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Production, isolation and purification of bacteriocins expressed by two strains of Neisseria meningitidis
AUTHOR: ALLUNANS J.; BJORAS M.; SEEBERG E.; BOVRE K.
CORPORATE SOURCE: Kaptein W. Wilhelmsen og Frues Institute of Medical Microbiology, University of Oslo, Rikshospitalet, Oslo, Norway
SOURCE: APMIS. Acta pathologica, microbiologica et immunologica Scandinavica, (1998), 106(12), 1181-1187, 27 refs.
ISSN: 0903-4641
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Denmark
LANGUAGE: English
AVAILABILITY: INIST-948, 354000073723200090
AN 1999-0209086 PASCAL
CP Copyright .COPYRGT. 1999 INIST-CNRS. All rights reserved.
AB The systemic Neisseria **meningitidis** strain P241 and the healthy pharyngeal carrier strain BT878 produce bacteriocin-like substances during growth. A method has been devised for obtaining the active substances in solution. The activity was **recovered** by freeze-thaw extraction of dialyzed Todd-Hewitt agar medium into which the bacteriocins had diffused during growth of the producer strains. The bacteriocins were purified more than 50-fold by ammonium-sulphate precipitation and hydrophobic interaction chromatography. They are quite stable to heat and remain active 100% after 30 min at 100°C. However, the **protein** nature of the bacteriocins has been confirmed by their sensitivity to α-chymotrypsin. Gel filtration indicated an M.sub.r of 100-110 kDa, whereas **SDS-polyacrylamide gel electrophoresis** produced a common band by Coomassie staining corresponding to an M.sub.r of 47-48 kDa, suggesting a dimer form of the active **protein** component.

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ACCESSION NUMBER: 1999:75001 BIOSIS
DOCUMENT NUMBER: PREV199900075001

TITLE: Extraction and immunogenicity of outer membrane protein complex from the strain 3407 of Nm serogroup B.
AUTHOR(S): Sun, Yinyan; Hu, Xujing [Reprint author]
CORPORATE SOURCE: Inst. Epidemiol. and Microbiol., Chinese Acad. Prev. Med., Beijing 102206, China
SOURCE: Zhonghua Weishengwuxue He Mianyixue Zazhi, (Nov. 30, 1998) Vol. 18, No. 6, pp. 423-427. print.
CODEN: ZWMZDP. ISSN: 0254-5101.
DOCUMENT TYPE: Article
LANGUAGE: Chinese
ENTRY DATE: Entered STN: 1 Mar 1999
Last Updated on STN: 1 Mar 1999

AB Objectives. The capsular polysaccharide of Neisseria **meningitidis** serogroup B is not an effective components for a vaccine candidate because there are some limits of serotype and subserotype in some noncapsular antigens, it will be significant to prepare an effective group B vaccine if a high immunogenic and broadly cross reactive outer membrane **protein** complex (OMPC) can be extracted from Nm serogroup B. Methods. Three methods for extracting OMPC from the strains 3407 of Nm serogroup B **isolated** from a clinical case were compared. ELISA, Bactericidal test, immunologic experiments with mice and Western-blotting were used for testing the antigenic titers and immunogenicity of OMPC. Results. Among the three methods for extracting OMPC, the method that the cultural supernatant was primarily precipitated with 70% saturated ammonium sulfate and further purified on Sephacryl S-300 HR column was chosen, and three elution peaks were obtained. The OMPC in the peak 1 was of the largest yield and of the best solubility. The 42, 39, 30, 26, 19kD and minor 92,72kD proteins in the OMPC were determined by **SDS-PAGE** and Western-blotting. The reactive titers of the OMPC with, the sera of rabbit anti-the strains 3407 and 542852, and with the sera of the mice antiOMPC were 1 : 32000 , 1 : 64000 , and 1 : 25600 , respectively. In addition , the reactive titers of the strains 3407 and 542852 as well as some different serotype and subserotype strains of Nm serogroup B with the sera of the mice anti-OMPC were 1 : 25600, 1 : 25600 and 1 : 640 to 1 : 3200, respectively, when ELISA was used for testing the above reactions. The bactericidal titers of anti-OMPC sera to the strains 3407 and 542852 were both 1 : 256. The OMPC extracted with other two methods showed lower antigencity , solubility and immunogenicity. Conclusions. The above OMPC of Nm serogroup B possessed high immunogenicity, good solubility and broadly cross reactivity. It seems to be hopeful that the OMPC could be chosen as a vaccine candidate of Nm serogroup B, and could be also useful as a carrier of protein coupling with capsular polysaccharide.

L25 ANSWER 7 OF 25 DISSABS COPYRIGHT (C) 2006 ProQuest Information and Learning Company; All Rights Reserved on STN
ACCESSION NUMBER: 96:56481 DISSABS Order Number: AAR9631995
TITLE: IRON REGULATION IN THE PATHOGENIC NEISSERIA (NEISSERIA MENINGITIDUS, NEISSERIA GONORRHOEAE)
AUTHOR: THOMAS, CHRISTOPHER ERBEN [PH.D.]; SPARLING, P. FREDERICK [advisor]
CORPORATE SOURCE: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL (0153)
SOURCE: Dissertation Abstracts International, (1996) Vol. 57, No. 5B, p. 3027. Order No.: AAR9631995. 128 pages.
DOCUMENT TYPE: Dissertation
FILE SEGMENT: DAI
LANGUAGE: English
ENTRY DATE: Entered STN: 19961001

Last Updated on STN: 19961001

AB The pathogenic Neisseria spp. produce a number of iron-regulated gene products that are thought to be important in virulence. The iron response in a number of bacterial systems is mediated by fur (ferric uptake regulation)-like regulatory systems. We have cloned and characterized a gene from Neisseria **meningitidis** that was homologous to Escherichia coli fur. This clone was capable of modulating expression from both E. coli and neisserial iron-regulated promoters in response to iron, and it produced a **protein** that reacted with anti-E. coli fur serum. Although the DNA and predicted amino acid sequences were very similar to those of many other published fur homologs, **meningococcal** fur was one of the most divergent of the group.

Evidence for the role of Fur in neisserial iron-regulation has been indirect because of the inability to make fur null mutations. To circumvent this problem, we used manganese selection to **isolate** missense mutations of Neisseria gonorrhoeae fur. We show that a mutation in gonococcal fur resulted in reduced modulation of expression of four well studied iron-repressed genes, and affected the iron-regulation of a broad range of other genes as judged by two-dimensional polyacrylamide **gel electrophoresis** (2-D PAGE). All 15 of the iron-repressed spots observed by 2-D PAGE were at least partially derepressed in the fur mutant, and 17 of the 45 iron-induced spots were affected by the fur mutation. Thus, Fur plays a central role in regulation of iron-repressed gonococcal genes, and appears to be involved in regulation of many iron-induced genes. The size and complexity of the iron regulons in N. gonorrhoeae is much larger than previously recognized.

L25 ANSWER 8 OF 25 PASCAL COPYRIGHT 2006 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER:	1996-0153457 PASCAL
COPYRIGHT NOTICE:	Copyright .COPYRGT. 1996 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH):	Rifampin resistance in Neisseria meningitidis due to alterations in membrane permeability
AUTHOR:	ABADI F. J. R.; CARTER P. E.; CASH P.; PENNINGTON T. H.
CORPORATE SOURCE:	Department of Medical Microbiology, University of Abredeen Medical School, Foresterhill, Aberdeen, United Kingdom
SOURCE:	Antimicrobial agents and chemotherapy, (1996), 40(3), 646-651, 22 refs. ISSN: 0066-4804 CODEN: AACHAX
DOCUMENT TYPE:	Journal
BIBLIOGRAPHIC LEVEL:	Analytic
COUNTRY:	United States
LANGUAGE:	English
AVAILABILITY:	INIST-13334, 354000053145890220

AN 1996-0153457 PASCAL

AB Rifampin-resistant (Rif.sup.r) Neisseria **meningitidis** strains are known to have single point mutations in the central conserved regions of the rpoB gene. We have demonstrated two distinct resistance phenotypes in strains with identical mutations in this region, an intermediate level of resistance in Rif.sup.r clinical **isolates** and a high level of resistance in mutants selected in vitro. The possible role of membrane permeability in the latter was investigated by measuring MICs in the presence of Tween 80 ; values for high-level-resistance mutants were reduced to intermediate

levels, whereas those for intermediate-level-resistance strains were unaffected. The highly resistant mutants were also found to have increased resistance to Triton X-100 and gentian violet. Sequencing of the **meningococcal** mtrR gene and its promoter region (which determine resistance to hydrophobic agents in Neisseria gonorrhoeae) from susceptible or intermediate strains and highly resistant mutants generated from them showed no mutation within this region. Two-dimensional **gel electrophoresis** of two parent and Rif.sup.r mutant strains showed identical shifts in the pI of one **protein**, indicating that differences between the parent and the highly Rif.sup.r mutant are not confined to the rpoB gene. These results indicate that both permeability and rpoB mutations play a role in determining the resistance of N. **meningitidis** to rifampin.

L25 ANSWER 9 OF 25 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 96341230 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8734960
TITLE: N-terminal amino acid sequences of the major outer membrane proteins from a Neisseria meningitidis group B strain isolated in Brazil.
AUTHOR: De Simone S G; Soares S A; Souza A L; Danelli M G
CORPORATE SOURCE: Departamento de Bioquimica e Biologia Molecular, Instituto Oswaldo Cruz, Brasil.
SOURCE: Memorias do Instituto Oswaldo Cruz, (1996 Jan-Feb) Vol. 91, No. 1, pp. 111-6.
Journal code: 7502619. ISSN: 0074-0276.
PUB. COUNTRY: Brazil
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 28 Jan 1997
Last Updated on STN: 28 Jan 1997
Entered Medline: 3 Dec 1996

AB The four dominant outer membrane **proteins** (46, 38, 33 and 28 kDa) were detected by **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** (**SDS-PAGE**) in a semi-purified preparation of vesicle membranes of a Neisseria **meningitidis** (N44/89, B:4:P1.15:P5.5,7) strain **isolated** in Brazil. The N-terminal amino acid sequence for the 46 kDa and 28 kDa **proteins** matched that reported by others for class 1 and 5 **proteins** respectively, whereas the sequence (25 amino acids) for the 38 kDa (class 3) **protein** was similar to class 1 **meningococcal proteins.** The sequence for the 33 kDa (class 4) was unique and not homologous to any known protein.

L25 ANSWER 10 OF 25 MEDLINE on STN
ACCESSION NUMBER: 94279537 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8010183
TITLE: The complex formation of influenza virus envelope glycoproteins with outer membrane proteins of Neisseria meningitidis or Borrelia burgdorferi.
AUTHOR: Slavik I; Pristasova S; Visacka E; Slavikova K; Matoska J; Toman R; Klockmann U
CORPORATE SOURCE: Institute of Virology, Slovak Academy of Sciences, Bratislava.
SOURCE: Acta virologica, (1993 Dec) Vol. 37, No. 6, pp. 449-58.
Journal code: 0370401. ISSN: 0001-723X.

PUB. COUNTRY: Czech Republic
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 29 Jul 1994
Last Updated on STN: 3 Feb 1997
Entered Medline: 20 Jul 1994

AB The **isolation** of influenza virus envelope glycoproteins was achieved by one-step procedure consisting of treatment of purified virus with zwitterionic detergent and separation of viral constituents by sucrose density gradient centrifugation. Viral glycoproteins and **proteins** of outer membrane of N. **meningitidis** or B. burgdorferi formed complexes after removal of the detergent by dialysis. Complexing of viral glycoproteins and bacterial proteins was monitored by gel chromatography on Sepharose 6B, polyacrylamide **gel electrophoresis** and electron microscopy. It was demonstrated by immunoblot analysis, that virus-spirochete complexes elicited formation of antibodies in mice directed against osp A and osp B of spirochete, as well as against viral glycoproteins, respectively.

L25 ANSWER 11 OF 25 DISSABS COPYRIGHT (C) 2006 ProQuest Information and Learning Company; All Rights Reserved on STN
ACCESSION NUMBER: 92:6414 DISSABS Order Number: AAR9226016
TITLE: ISOLATION AND CHARACTERIZATION OF THE GENE ENCODING THE MAJOR ANAEROBICALLY INDUCED OUTER MEMBRANE PROTEIN OF NEISSERIA GONORRHOEAE
AUTHOR: HOEHN, GERARD THOMAS [PH.D.]; CLARK, VIRGINIA L. [advisor]
CORPORATE SOURCE: THE UNIVERSITY OF ROCHESTER (0188)
SOURCE: Dissertation Abstracts International, (1992) Vol. 53, No. 4B, p. 1701. Order No.: AAR9226016. 205 pages.
DOCUMENT TYPE: Dissertation
FILE SEGMENT: DAI
LANGUAGE: English
ENTRY DATE: Entered STN: 19921118
Last Updated on STN: 19921118

AB When grown anaerobically, Neisseria gonorrhoeae, the etiologic agent of the sexually transmitted disease gonorrhea, induces the synthesis of several outer membrane proteins. One of these, designated Pan 1, is recognized by sera from women with gonococcal infection. The presence of antibodies directed against the Pan 1 protein suggests that N. gonorrhoeae grows anaerobically in vivo and that Pan1 may be involved in infection.

To analyze the Pan 1 protein, mouse polyclonal anti-Pan 1 antiserum was generated from gel-purified Pan 1. Specificity of the antiserum to Pan 1 was demonstrated by immunoblot analysis of outer membranes prepared from aerobically or anaerobically grown cells. On silver-stained **SDS-PAGE** gels, Pan 1 appeared as an intense and diffuse band, suggesting the presence of an N-terminal modification. When N. gonorrhoeae was grown anaerobically with ($\sp3$-H) palmitic acid, label was specifically incorporated into the Pan 1 protein, indicating that it is a lipoprotein.

The Pan 1 gene (aniA) was cloned by screening a phage expression library with anti-Pan 1 antiserum. Three immunoreactive clones containing overlapping DNA fragments were **isolated.** All clones were able to adsorb anti-Pan 1 antibody that, when eluted from the plaques, reacted to Pan 1. Immunoblot analysis of recombinant lysogens showed that two of the clones made fusion proteins that

reacted with anti-Pan 1 antiserum. Northern blot analysis revealed that aniA mRNA is only made anaerobically, confirming that the clones code for an anaerobically induced protein.

The sequence of the aniA gene predicted a mature protein of 39 kDa with a lipoprotein leader consensus sequence. The Pan1 protein showed extensive homology at the N-terminus to two gonococcal lipoproteins, H.8 and azurin. Primer extension analysis demonstrated the presence of two transcriptional start sites: one promoter with homology to the $-$10 region of $\sigma\sp{70}$ promoters, and another promoter with extensive homology to the $-$10 and $-$35 regions of E. coli "gearbox" promoters.

The distribution of Pan1 among Neisseria species was investigated at the **protein** and molecular level. The aniA gene was present and expressed in all N. gonorrhoeae strains tested. In N. **meningitidis**, all strains had a copy of the aniA gene, but expressed little, if any Pan1 **protein.** Several commensal Neisseria species contained the aniA gene and expressed Pan1 **protein.**

L25 ANSWER 12 OF 25 TOXCENTER COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:149260 TOXCENTER
COPYRIGHT: Copyright 2006 ACS
DOCUMENT NUMBER: CA11705044186D
TITLE: Common antigenic domains in transferrin-binding protein 2 of Neisseria meningitidis, Neisseria gonorrhoeae, and Haemophilus influenzae type b
AUTHOR(S): Stevenson, Pauline; Williams, Paul; Griffiths, Elwyn
CORPORATE SOURCE: Natl. Inst. Biol. Stand. Control, Potters Bar/Hertfordshire, EN6 3QG, UK.
SOURCE: Infection and Immunity, (1992) Vol. 60, No. 6, pp. 2391-6.
CODEN: INFIBR. ISSN: 0019-9567.
COUNTRY: UNITED KINGDOM
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1992:444186
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Nov 2001
Last Updated on STN: 1 Oct 2002

AB There is now considerable evidence to show that in the Neisseria and Haemophilus species, membrane receptors specific for either transferrin or lactoferrin are involved in the acquisition of iron from these glycoproteins. In Neisseria **meningitidis**, the transferrin receptor appears to consist of two **proteins**, one of which (TBP 1) has an Mr of 95,000 and the other of which (TBP 2) has an Mr ranging from 68,000 to 85,000, depending on the strain; TBP 2 binds transferrin after **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** and electroblotting, but TBP 1 does not do so. Previous work with polyclonal antibodies raised in mice with whole cells of iron-restricted N. meningitidis showed that the meningococcal TBP 2 exhibits considerable antigenic heterogeneity. Here, the authors report that antiserum against purified TBP 2 from one strain of N. meningitidis cross-reacts on immunoblotting with the TBP 2 of all meningococcal **isolates** examined, as well as with the TBP 2 of N. gonorrhoeae. This antiserum also cross-reacted with the TBP 2 of several strains of H. influenzae type b, thus showing the presence of common antigenic domains among these functionally equivalent proteins in different pathogens; no cross-reaction was detected with a purified sample of the human transferrin receptor.

L25 ANSWER 13 OF 25 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 92219993 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1560777
TITLE: Role of horizontal genetic exchange in the antigenic variation of the class 1 outer membrane protein of Neisseria meningitidis.
AUTHOR: Feavers I M; Heath A B; Bygraves J A; Maiden M C
CORPORATE SOURCE: Division of Bacteriology, National Institute for Biological Standards and Control, Potters Bar, Hertfordshire, UK.
SOURCE: Molecular microbiology, (1992 Feb) Vol. 6, No. 4, pp. 489-95.
Journal code: 8712028. ISSN: 0950-382X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199205
ENTRY DATE: Entered STN: 29 May 1992
Last Updated on STN: 29 May 1992
Entered Medline: 14 May 1992

AB The nucleotide sequences of the genes encoding the class 1 outer membrane **protein** of Neisseria **meningitidis** (PorA) from 15 **meningococcal isolates** have been examined. These strains, **isolated** over a number of years, represented a variety of serological types, clonal groups, and geographical locations. Analysis of the aligned nucleotide sequences showed that the known serological relationships between these proteins were not necessarily reflected throughout the nucleotide sequences of their genes. The uneven distribution of base substitutions, revealed by a comparison of the informative bases, suggested that these genes possessed a mosaic structure. This structure probably resulted from the horizontal transfer of DNA between strains and would have contributed to both the generation and the spread of novel antigenic variants of the protein. In addition, the nucleotide differences between porA genes from different strains were not consistent with the nucleotide sequence divergence of the whole chromosome, as indicated by pulsed-field **gel electrophoresis** (PFGE) fingerprinting techniques: some strains with divergent PFGE fingerprints shared porA genes with extensive regions of nucleotide sequence identity and, conversely, some strains with similar chromosome structures possessed porA genes with different nucleotide sequences and serological properties. This suggested that entire genes had been exchanged between strains. Given that the meningococcal class 1 OMP is a major component in novel vaccines, some of which are currently undergoing field trials, the potential of horizontal genetic exchange to generate antigenic diversity has implications for the design of such vaccines.

L25 ANSWER 14 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1991:478636 BIOSIS
DOCUMENT NUMBER: PREV199192112396; BA92:112396
TITLE: NEISSERIA-MENINGITIDIS GROUP B SEROTYPE 2A 2C 1 CROSS-REACTIVITY OF MOUSE ANTIBODY IGG IGM AND IGA RESPONSE IN IMMUNOBLOT TECHNIQUE.
AUTHOR(S): GASPARI E N D [Reprint author]; GHILLARDI A C R
CORPORATE SOURCE: LABORATORIOS DE IMMUNOLOGIA, INSTITUTO ADOLFO LUTZ, AVENIDA DR ARNALDO 351, 11 ANDAR, CP 7027, 01246 SAO

PAULO-SP, BRASIL
SOURCE: Revista de Microbiologia, (1991) Vol. 22, No. 2, pp. 101-107.
CODEN: RMBGBP. ISSN: 0001-3714.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 26 Oct 1991
Last Updated on STN: 26 Oct 1991

AB Group B **meningococci** have been subdivided into a series of serotypes based upon the antigenic specificity of **protein** present in their outer membranes. Antigens of N. meningitidis B serotypes 2a, 2c, 1 were extracted with 0,2 M LiCl. The antigens were analyzed by **sodium dodecyl** sulfate **polyacrylamide gel electrophoresis** (**SDS-PAGE**), and by the specific antibody raised in Balb/c mice immunized with antigens from the outer membrane or whole organisms. The reactivity against **polypeptides** from the N. **meningitidis** was determined by immunoblot, and the level of antibodies to bacterium outer membrane in the serum by immunodot. The immunoblot technique showed that antigens from outer membrane of N. meningitidis B induced the production of IgG, IgM and IgA antibodies which cross-reacted with epitopes present in N. meningitidis serogroups C, and A, both **isolated** from patients with meningococcal septicemia.

L25 ANSWER 15 OF 25 DISSABS COPYRIGHT (C) 2006 ProQuest Information and Learning Company; All Rights Reserved on STN
ACCESSION NUMBER: 93:11479 DISSABS Order Number: AARC267349 (not available for sale by UMI)
TITLE: ANTIGENIC VARIATION IN THE OUTER MEMBRANE PROTEINS OF NEISSERIA MENINGITIDIS AND THE SUITABILITY OF THE H.8 ANTIGEN FOR USE IN IMMUNISATION AGAINST MENINGOCOCCAL DISEASE
AUTHOR: TINSLEY, COLIN RICHARD [PH.D.]
CORPORATE SOURCE: UNIVERSITY OF SOUTHAMPTON (UNITED KINGDOM) (5036)
SOURCE: Dissertation Abstracts International, (1990) Vol. 54, No. 1C, p. 163. Order No.: AARC267349 (not available for sale by UMI).
DOCUMENT TYPE: Dissertation
FILE SEGMENT: DAI
LANGUAGE: English
ENTRY DATE: Entered STN: 19930309
Last Updated on STN: 19930309

AB Inter- and intra-strain variation in the surface-exposed **proteins** of N. **meningitidis** was investigated in order to compare the variability with that which had been reported for the closely-related N. gonorrhoeae and to identify antigens possessing conserved epitopes which were stably expressed by the bacteria. Radioimmune precipitation, **SDS-PAGE** of surface radioiodinated disease **isolates** and **isolated** outer membrane vesicles, and western blotting techniques demonstrated variability in the major outer membrane **proteins** and pilin both between strains and during the course of infection. Several monoclonal antibodies recognised an antigen which was common to all pathogenic Neisseriae, and absent from most commensal organisms. The stable expression of this antigen suggested that it might have an important role in pathogenesis and made it an attractive choice for further study.

The pathogenic Neisseria antigen was shown to have unusual

properties which, together with its peculiarity to pathogenic species and apparent molecular mass range, it shared with the H.8 antigen found by Cannon and coworkers (Infection and Immunity, (1984), 43, 994-999). Further similarities have confirmed that these are the same protein.

Two published methods for purification of the antigen were investigated: Gel filtration followed by ion exchange chromatography, or extraction into phenol, precipitation of lipopolysaccharide, and lipophilic gel filtration followed by reverse-phase HPLC. However, better results were obtained after development of an affinity chromatography system with an anti-H.8 monoclonal antibody immobilised on a cyanogen bromide-sepharose column. Due to difficulties in staining the antigen after **SDS-PAGE** a quantitative spot blot assay was developed for its detection, based on the ELISA principle. Amino acid analysis showed the antigen to be rich in alanine, glutamine, and proline and lacking in sulphur-containing amino acids.

Immunisation of mice with purified antigen from one strain of meningococcus produced antisera reactive with the H.8 antigens of the homologous and heterologous strains. However, this serum and the H.8-directed monoclonal antibodies were ineffective in an in vitro complement-mediated bactericidal assay. Initial experiments showed poor opsonic activity for a monoclonal antibody.

Synthetic oligopeptides corresponding to regions of the primary sequence of the H.8 antigen were used to define the epitopes recognised by the serum and monoclonal antibodies. Since neither polyclonal sera nor monoclonal antibodies directed against a variety of epitopes showed biological activity it appears that immunisation with the H.8 antigen would not elicit protection against meningococcal disease.

L25 ANSWER 16 OF 25 MEDLINE on STN DUPLICATE 6

ACCESSION NUMBER: 89173292 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2494107
TITLE: Genetic diversity of penicillin G-resistant Neisseria meningitidis from Spain.
AUTHOR: Mendelman P M; Caugant D A; Kalaitzoglou G; Wedege E; Chaffin D O; Campos J; Saez-Nieto J A; Vinas M; Selander R K
CORPORATE SOURCE: Division of Infectious Diseases, Children's Hospital, Seattle, Washington.
CONTRACT NUMBER: AI24630 (NIAID)
AI24631 (NIAID)
SOURCE: Infection and immunity, (1989 Apr) Vol. 57, No. 4, pp. 1025-9.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198905
ENTRY DATE: Entered STN: 6 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 5 May 1989

AB Genotypic and phenotypic diversity among 16 penicillin G-resistant (Penr) **isolates** of Neisseria **meningitidis** **recovered** from human blood or cerebrospinal fluid in Spain was compared with that among 12 penicillin-susceptible (Pens) **isolates** by the use of multilocus enzyme electrophoresis, serotyping, auxotroph testing in chemically defined media, and

sodium dodecyl sulfate-**polyacrylamide gel electrophoresis** of penicillin-binding **proteins** (PBPs). Thirteen distinctive multilocus enzyme genotypes (electrophoretic types [ETs]) were identified among the 28 **isolates.** There was slightly less genetic diversity among the eight ETs of Penr **isolates** (H = 0.385) than among the eight ETs of Pens **isolates** (H = 0.431). Cluster analysis demonstrated two distinctive complexes of ETs and one ET that was not closely related to either complex. The possibility of a singular clonal origin of penicillin G-resistant **isolates** was excluded by the observations that resistance occurred in **isolates** of each of the two distantly related complexes of ETs, that three of the four ETs represented by multiple **isolates** included both susceptible and resistant strains, and that serotypes and growth requirements were not associated with the resistance phenotype. The 28 **isolates** showed a relatively homogeneous pattern of four PBPs, with apparently reduced penicillin G binding by PBP 3 of the Penr **isolates.**

L25 ANSWER 17 OF 25 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 90000847 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2571351
TITLE: Increased adherence to vaginal epithelial cells and phagocytic killing of gonococci and urogenital meningococci associated with heat modifiable proteins.
AUTHOR: Hagman M; Danielsson D
CORPORATE SOURCE: Department of Clinical Microbiology and Immunology, Orebro Medical Center Hospital, Sweden.
SOURCE: APMIS : acta pathologica, microbiologica, et immunologica Scandinavica, (1989 Sep) Vol. 97, No. 9, pp. 839-44.
Journal code: 8803400. ISSN: 0903-4641.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198911
ENTRY DATE: Entered STN: 28 Mar 1990
Last Updated on STN: 6 Feb 1995
Entered Medline: 8 Nov 1989

AB Urogenital Neisseria **meningitidis** were characterized with regard to serogroup, colony morphology, the presence of heat modifiable **proteins** (HMP), attachment to human vaginal and buccal epithelial cells, and phagocytic killing by polymorphonuclear leukocytes. The findings were compared with those on gonococci, and with those on meningococci **isolated** from blood or cerebrospinal fluid, with regard to colony morphology, HMP and piliation. The opacity colony morphology characteristic could be used to predict the presence of HMP in gonococci but not in **meningococci**, and **sodium dodecyl** sulphate **polyacrylamide gel electrophoresis** had to be used to demonstrate this surface **protein.** The urogenital meningococci, serogroup Y, attached significantly more efficinetly to vaginal epithelial cells in the presence of HMP and behaved in this respect like those of gonococci. Gonococci and meningococci containing HMP were more sensitive to phagocytic killing than those without HMP. Meningococci from opaque and transparent colonies and **isolated** from patients with meningococcal disease had no demonstrable HMP. They showed low adherence to vaginal and buccal epithelial cells, with no difference between organisms from opaque or

transparent colonies.

L25 ANSWER 18 OF 25 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 89108607 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2463970
TITLE: Neisseria lactamica and Neisseria meningitidis share lipooligosaccharide epitopes but lack common capsular and class 1, 2, and 3 protein epitopes.
AUTHOR: Kim J J; Mandrell R E; Griffiss J M
CORPORATE SOURCE: Centre for Immunochemistry, University of California, San Francisco 94143.
CONTRACT NUMBER: AI 21620 (NIAID)
SOURCE: Infection and immunity, (1989 Feb) Vol. 57, No. 2, pp. 602-8.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198903
ENTRY DATE: Entered STN: 8 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 1 Mar 1989

AB Neisseria lactamica, a common human pharyngeal commensal, contributes to acquired immunity to Neisseria meningitidis. To define the surface antigens shared between these two species, we used monoclonal antibodies (MAbs) to study 35 N. lactamica strains **isolated** in various parts of the world for cross-reactivity with **meningococcal** capsules, outer membrane **proteins**, and lipooligosaccharides (LOS). No N. lactamica strain reacted significantly with MAbs specific for capsular group A, B, C, Y, or W, and we were unable to extract capsular polysaccharide from them. Only 2 of 33 strains reacted weakly with MAbs against class 2 serotype proteins P2b and P2c. None reacted with MAbs specific for **meningococcal** class 1 **protein** P1.2 or P1.16 or class 2/3 serotype **protein** P2a or P15. Most N. lactamica strains (30 of 35) bound one or more of seven LOS-specific MAbs. Two LOS epitopes, defined by MAbs O6B4 and 3F11, that are commonly found on pathogenic Neisseria species were found on 25 of 35 N. lactamica. Analysis by **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** and immunoblotting showed that the LOS of N. lactamica are composed of multiple components that are physically and antigenically similar to the LOS of pathogenic Neisseria species. Among four other commensal neisserial species, only Neisseria cinerea shared LOS epitopes defined by MAbs O6B4 and 3F11. Previous studies have shown that pharyngeal colonization with N. lactamica induces bactericidal antibodies against the meningococcus. We postulate that shared N. lactamica and meningococcal LOS epitopes may play an important role in the development of natural immunity to the meningococcus.

L25 ANSWER 19 OF 25 DISSABS COPYRIGHT (C) 2006 ProQuest Information and Learning Company; All Rights Reserved on STN
ACCESSION NUMBER: 87:38851 DISSABS Order Number: AAR8821482
TITLE: MOLECULAR BIOLOGY OF NEISSERIA MENINGITIDIS CLASS 5 AND H.8 OUTER MEMBRANE PROTEINS
AUTHOR: KAWULA, THOMAS HARDIN [PH.D.]; CANNON, JANNE G. [advisor]
CORPORATE SOURCE: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL (0153)
SOURCE: Dissertation Abstracts International, (1987) Vol. 49,

No. 12B, p. 5140. Order No.: AAR8821482. 132 pages.
DOCUMENT TYPE: Dissertation
FILE SEGMENT: DAI
LANGUAGE: English
ENTRY DATE: Entered STN: 19921118
Last Updated on STN: 19921118

AB The surface **proteins** of Neisseria **meningitidis**, causative agent of meningitis, are probably important in the interaction of this pathogen with the host. The work presented here concerns two different outer membrane **proteins** of the **meningococcus**: one that demonstrates extensive antigenic variability, and one that is antigenically conserved in the pathogenic Neisseria.

One of the surface structures responsible for inter- and intrastrain antigenic variability in **meningococci** is the heat-modifiable class 5 (C.5) **protein.** Neisseria **meningitidis** strain FAM18 (a **meningococcal** disease **isolate**) expressed two different C.5 **proteins** (C.5a and C.5b) identifiable by **sodium dodecyl** sulfate **polyacrylamide gel electrophoresis.** We generated two monoclonal antibodies (MAbs), each specific for one of the identified C.5 **proteins.** The MAbs, which were bactericidal for variants expressing the appropriate C.5 **protein**, were used to study C.5 expression changes in FAM18. The two C.5 **proteins** demonstrated independent, reversible phase variation of expression. N-terminal amino acid sequence of a purified C.5 **protein**, and N-terminal amino acid sequence predicted from a cloned C.5 gene, revealed extensive homology to conserved N-terminal amino acid sequences of gonococcal P.II **proteins.** The close relationship between **meningococcal** C.5 and gonococcal P.II **proteins** was confirmed by cross hybridization of a cloned C.5 gene to conserved gonococcal P.II gene sequences.

The H.8 **protein** is an antigenically conserved outer membrane **protein** expressed almost exclusively by the pathogenic Neisseria. We have cloned and sequenced an H.8 gene from N. **meningitidis** FAM18. The predicted H.8 amino acid sequence indicated that the most probable signal **peptide** processing site matched the consensus prokaryotic lipoprotein processing/modification sequence. We then showed that the H.8 **protein** could be labeled with $\sp{14}$C-palmitic acid, confirming that H.8 was a lipoprotein. Processing of the H.8 **protein** was inhibited by globomycin in E. coli indicating that H.8 was modified by the described lipoprotein processing/modifying pathway described in both gram negative and gram positive genera.

The N-terminal 39 amino acids of the mature H.8 was composed primarily of alanine, glutamate, and proline; and these three amino acids were arranged in imperfect repeated units of AAEAP. The H.8 MAb-binding epitope was localized to a 20 amino acid sequence entirely within this 39 amino acid region. (Abstract shortened with permission of author.)

L25 ANSWER 20 OF 25 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 87168188 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3559476
TITLE: Purification and characterization of the major iron-regulated protein expressed by pathogenic Neisseriae.
AUTHOR: Mietzner T A; Bolan G; Schoolnik G K; Morse S A
CONTRACT NUMBER: AI-22148 (NIAID)

AI-22974 (NIAID)
SOURCE: The Journal of experimental medicine, (1987 Apr 1) Vol. 165, No. 4, pp. 1041-57.
Journal code: 2985109R. ISSN: 0022-1007.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198705
ENTRY DATE: Entered STN: 3 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 6 May 1987

AB This report describes a method to purify the major iron-regulated **protein** (MIRP) expressed by N. gonorrhoeae and N. **meningitidis.** This purification procedure involves maximal expression of the MIRP by growing the organisms on iron-limited media; cellular disruption by sonication followed by centrifugal fractionation; selective solubilization of the MIRP with the cationic detergent hexadecyltrimethylammonium bromide; cation-exchange chromatography in the presence of this detergent; and gel filtration chromatography. The MIRP purified by this technique migrates as a single band when analyzed by **SDS-PAGE.** The purified MIRP displayed an unusually basic isoelectric point, this value being greater than 9.35. Further biochemical analysis revealed the highly conserved nature of this protein **isolated** from the two pathogenic species of the genus Neisseria. For example, the amino acid composition of the meningococcal and gonococcal MIRPs were nearly identical and amino terminal sequence analysis showed that both shared the identical primary sequence through residue 48. Surprisingly, the first five NH2-terminal residues of the MIRPs exhibited homology with the first five residues of the gonococcal porin, protein I. Purified preparations of the MIRP exhibited a characteristic pink color reminiscent of the basic iron-binding protein lactoferrin. This observation coupled with the property of iron-regulation prompted us to analyze purified MIRP for iron-content. Approximately 0.5 mol iron per 1 mol of MIRP was detected. This study is the first to show that iron is associated with the MIRP, a property that may implicate this protein as playing a direct role in neisserial iron assimilation. While the precise function of the MIRP is not known, the availability of this protein in pure and biologically relevant quantities will allow further studies to elucidate its pathobiologic function.

L25 ANSWER 21 OF 25 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 88178890 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3127952
TITLE: **SDS-PAGE** analysis of membrane **proteins** of group A Neisseria **meningitidis isolated** before and during an epidemic of group A **meningococcal** disease in northern Nigeria.
AUTHOR: Hassan-King M; Greenwood B M
CORPORATE SOURCE: Medical Research Council Laboratories, Fajara, Banjul, The Gambia.
SOURCE: Transactions of the Royal Society of Tropical Medicine and Hygiene, (1987) Vol. 81, No. 1, pp. 11-3.
Journal code: 7506129. ISSN: 0035-9203.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 198804
ENTRY DATE: Entered STN: 8 Mar 1990
Last Updated on STN: 8 Mar 1990
Entered Medline: 28 Apr 1988

AB **Meningococcal** membrane **protein** patterns were studied by **SDS-PAGE** analysis of group A **meningococci isolated** before and during a large epidemic of group A **meningococcal** disease in northern Nigeria. No difference was found in the membrane protein patterns of strains **isolated** before or during the 3 years of the epidemic. **Isolates** obtained from cases and carriers had similar membrane protein patterns.

L25 ANSWER 22 OF 25 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 86252506 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2873189
TITLE: An unusual Neisseria isolated from conjunctival cultures in rural Egypt.
AUTHOR: Mazloum H; Totten P A; Brooks G F; Dawson C R; Falkow S; James J F; Knapp J S; Koomey J M; Lammel C J; Peters D; +
CONTRACT NUMBER: AI-15642 (NIAID)
AI-21912 (NIAID)
EY-00427 (NEI)
+
SOURCE: The Journal of infectious diseases, (1986 Aug) Vol. 154, No. 2, pp. 212-24.
Journal code: 0413675. ISSN: 0022-1899.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198608
ENTRY DATE: Entered STN: 21 Mar 1990
Last Updated on STN: 29 Jan 1999
Entered Medline: 18 Aug 1986

AB Seven **isolates** of an unusual Neisseria sp. were obtained from eye cultures of children in two rural Egyptian villages. These Neisseria utilized only glucose, they exhibited a positive reaction when tested with antisera to crude antigen from Neisseria meningitidis and N. gonorrhoeae, and they did not react with the fluorescent antibody tests for N. gonorrhoeae or with the monoclonal antibodies used to serotype gonococci. The Egyptian **isolates** had colony morphology more typical of meningococci than gonococci and showed opaque and transparent colony variants. On **SDS-PAGE**, the major outer-membrane **proteins** had different patterns than those noted for comparable **proteins** of **meningococci** and gonococci; heat-modifiable outer-membrane **proteins** were present. Four of the six **isolates** examined had cryptic plasmids of 2.8 megadaltons, which were slightly larger than the cryptic plasmid of N. gonorrhoeae. These plasmids were homologous to the gonococcal cryptic plasmid, but had different restriction enzyme fragment patterns. The DNA from the Egyptian **isolates**, like DNA from N. meningitidis but unlike DNA from N. gonorrhoeae, could be cut with the restriction enzyme HaeIII. The frequency of transformation into a temperature-sensitive mutant of N. gonorrhoeae was 0.2 for the Egyptian **isolates** and 0.1 for N. meningitidis, a frequency that was 5-10-fold lower than that for the N. gonorrhoeae control **isolates**. Whole-cell

DNA from the Egyptian **isolates** showed 68%-73% homology with N. gonorrhoeae and 57%-63% with N. meningitidis. On the basis of our observations, the Egyptian **isolates** are distinct from N. meningitidis and may represent a variant of N. gonorrhoeae. We suggest that the **isolates** be called Neisseria gonorrhoeae ssp. kochii.

L25 ANSWER 23 OF 25 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 83159864 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6403470
TITLE: Preparation and physicochemical and immunological characterization of polysaccharide-outer membrane protein complexes of Neisseria meningitidis.
AUTHOR: Beuvery E C; Miedema F; van Delft R W; Haverkamp J; Leussink A B; te Pas B J; Teppema K S; Tiesjema R H
SOURCE: Infection and immunity, (1983 Apr) Vol. 40, No. 1, pp. 369-80.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198305
ENTRY DATE: Entered STN: 18 Mar 1990
Last Updated on STN: 18 Mar 1990
Entered Medline: 5 May 1983

AB A crude complex containing group C polysaccharide, outer membrane **proteins**, and lipopolysaccharide (LPS) was **isolated** from the cell-free culture liquid of Neisseria **meningitidis** serogroup C, serotype 2a. Group C polysaccharide and LPS were removed from this complex, resulting in an outer membrane complex and a purified complex, respectively. Analysis by electron microscopy showed the outer membrane origin of the crude complex and the outer membrane complex, whereas such a structure was absent in the purified complex. **Sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** patterns of the three complexes were identical. Pyrolysis-mass spectrometry data correlated well with those obtained by the biochemical assays and suggested a low LPS content in the purified complex and a low polysaccharide content in the outer membrane complex. The purified complex was shown to be nonpyrogenic and could be prepared with the same yield as that of purified polysaccharide. The immunogenic activities of the complexes were studied in mice. The antibodies were measured by the enzyme-linked immunosorbent assay; and the bactericidal antibody assay. All complexes induced immunoglobulin G antibodies to group C polysaccharide as well as to the serotype antigen, although the removal of polysaccharide and LPS resulted in a reduction of the immunogenic activities of outer membrane complex and purified complex, respectively. A second dose of all complexes produced a clear booster effect of both antibody responses. The antibodies were bactericidal.

L25 ANSWER 24 OF 25 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 83007660 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6811609
TITLE: Sodium dodecyl sulfate-polyacrylamide gel typing system for characterization of Neisseria meningitidis isolates.
AUTHOR: Mocca L F; Frasch C E
SOURCE: Journal of clinical microbiology, (1982 Aug) Vol. 16,

No. 2, pp. 240-4.
Journal code: 7505564. ISSN: 0095-1137.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198212
ENTRY DATE: Entered STN: 17 Mar 1990
Last Updated on STN: 17 Mar 1990
Entered Medline: 2 Dec 1982

AB Thirty to fifty percent of group B and group C Neisseria **meningitidis** carrier **isolates** are not serotypable with existing outer membrane **protein** typing sera. A typing system based on differences in the outer membrane protein profiles after **sodium dodecyl** sulfate-**polyacrylamide gel electrophoresis** (**SDS-PAGE**) was therefore developed as an adjunct to existing serotyping methods. Although most N. **meningitidis** strains contain several outer membrane **proteins** visible by **SDS-PAGE**, there are only one to three predominant **proteins**. The **SDS-PAGE** profiles of these major proteins were used to establish 10 different PAGE types. Greater than 95% of all meningococcal **isolates**, regardless of serogroup, fit into 1 of the 10 PAGE types. The outer membrane protein profile of individual strains after **SDS-PAGE** was constant when outer membrane fractions were prepared from the same strain on several different days. A comparison of gel profiles of **meningococcal isolates** obtained from different sites of the same patient revealed no significant differences among both major and minor **proteins** for **isolate** sets thus far examined. Characterization of strains by PAGE type can be a valuable epidemiological tool in addition to serotyping and in the absence of specific serotype antisera.

L25 ANSWER 25 OF 25 DISSABS COPYRIGHT (C) 2006 ProQuest Information and Learning Company; All Rights Reserved on STN
ACCESSION NUMBER: 80:30351 DISSABS Order Number: AAR8112611
TITLE: STUDIES ON THE SOMATIC PILI OF NEISSERIA MENINGITIDIS: STRUCTURAL AND SEROLOGICAL CHARACTERIZATIONS
AUTHOR: LEE, SIMON WOON-CHEUNG [PH.D.]
CORPORATE SOURCE: UNIVERSITY OF PITTSBURGH (0178)
SOURCE: Dissertation Abstracts International, (1980) Vol. 41, No. 12B, p. 4391. Order No.: AAR8112611. 165 pages.
DOCUMENT TYPE: Dissertation
FILE SEGMENT: DAI
LANGUAGE: English
ENTRY DATE: Entered STN: 19921118
Last Updated on STN: 19921118

AB The ubiquitous occurrence of pili in N. meningitidis was documented. Seventy-three percent of meningococcal **isolates** (29/40) were found to be piliated by electron microscopy. It was concluded that piliation in the meningococcus was independent of the serological classification by the capsular polysaccharide antigens, the source of **isolation** and the colonial morphology. In addition, nonselective laboratory subcultures favored the growth of nonpiliated phase variants.

Meningococcal pili were purified from the polysaccharide serogroup strains A, B, C and W135. All four purification procedures were based on the differential solubility of meningococcal pili under specific solvent conditions and the strong tendency of pili to form

longitudinally aggregated paracrystals. The preparations were judged to be pure and homogeneous by **sodium dodecyl** sulfate **polyacrylamide gel electrophoresis**, cesium chloride density gradient equilibrium sedimentation, ultraviolet absorption spectroscopy, darkfield microscopy and electron microscopy.

Purified pili were very flexible and showed no core structures. Detailed analysis of a single pilus type indicated that the average diameter was about 57 nm. Physical and chemical analyses demonstrated that these several pilus types were very similar. They were polymeric assemblies of **protein** monomers, the size of which ranged from 18,000 to 23,000 daltons. Their buoyant density in pH 9.0 Tris-saline buffer about 1.31 gm/cc. The UV absorption peak was at 278 nm. Amino acid analysis showed that **meningococcal** pili were composed of the twenty common amino acid residues with an average of 14 acidic, 22% basic, 27% hydrophobic and 39% polar side chains.

Using purified pili and hyperimmune rabbit antisera in an enzyme linked immunosorbent assay (ELISA), all four meningococcal pili were found to be related serologically by a common set of antigenic determinants. Two-way analysis of the heterologous cross-reactivity and cross absorption experiments established that the four meningococcal pili and five of the gonococcal pili studied in this laboratory were also related by the same set of antigenic determinants. Comparison of their physical, chemical and serological properties led to the conclusion that these two pilus types belonged to the same family of pili, which is unique and unrelated to the Type 1 pili of E. coli.

Serum anti-meningococcal pilus antibody levels were measured in diseased as well as in nondiseased human populations. Using meningococcal pili in a standardized ELISA assay, elevated levels of antipilus antibody were detected in patients with clinical case of meningococcal infection. The average titers of the acute and the convalescent sera (N = 13) were 3,815 and 11,604 respectively. For comparison, the asymptomatic carriers (N - 42) had an average titer of 3,023 and noncarriers (N = 30) had a titer of 2,094. Female patients with gonococcal pelvic inflammatory disease (N = 14) had an average titer of 5,343 during the acute phase and 7,364 during the convalescent phase of infection. Experiments using gonococcal pili as test antigen were also performed. Comparable titers for each category were obtained. These results, besides confirming the immunological relatedness of the meningococcal and gonococcal pili, provided evidence that these somatic pili are immunogenic in humans and therefore can be used as components in a neisserial vaccine and as test antigens in a blood test for serodiagnosis.

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(FILE 'HCAPLUS' ENTERED AT 14:58:02 ON 21 SEP 2006)
L26          622 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("GEL ELECTROPHORESIS"+ALL
                 AND "NEISSERIA MENINGITIDIS"+ALL)/CT
L27          228 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND PROTEINS/CT
L28           14 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 AND "MOLECULAR
                 WEIGHT"+ALL/CT

L29           14 S L28 NOT (L11 OR L21)

L29  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2006 ACS on STN
ED   Entered STN:  30 Sep 2005
ACCESSION NUMBER:         2005:1049874  HCAPLUS
DOCUMENT NUMBER:          143:321764
TITLE:                    Patterning method for biosensor applications and
                          devices comprising such patterns
```

INVENTOR(S): Asberg, Peter; Nilsson, Peter; Inganaes, Olle
PATENT ASSIGNEE(S): Biochromix AB, Swed.
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090975	A1	20050929	WO 2005-SE413	20050322

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: SE 2004-783 A 20040324

AB The invention relates to a patterned substrate for biosensing applications, wherein the pattern comprises hydrophilic and hydrophobic areas, and wherein selected ones of said areas comprise at least one reporter mol., a property of which is detectable. It also relates to a method of making a patterned substrate comprising performing a stamping procedure to provide a pattern of hydrophilic and hydrophobic areas on a substrate of a suitable material. One step of the stamping procedure comprises attaching at least one reporter mol. to at least selected ones of said areas, the fluorescence of said conjugated polyelectrolyte being detectable and which will change as a result of interaction with a biomol. Surface modified patterned glass substrates containing zwitterionic conjugated polyelectrolyte poly(3-[(S)-5-amino-5-methoxycarboxyl-3-oxapentyl]-2,5-thiophenylene hydrochloride) (POMT) were used to differentiate between different conformations of peptide JR4E. POMT/JR4E at pH 5.9 in phosphate buffer stained the hydrophilic area green and did not stain the hydrophobic area. POMT/JR4E at pH 6.8 in phosphate buffer stained the hydrophobic area orange and did not stain the hydrophilic area.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 07 Apr 2005
ACCESSION NUMBER: 2005:300694 HCAPLUS
DOCUMENT NUMBER: 142:351673
TITLE: Automated analytical method and apparatus
INVENTOR(S): Kurosawa, Shigeru; Aizawa, Hidenobu
PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan
SOURCE: PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005031316	A1	20050407	WO 2004-JP14664	20040929

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-338604 A 20030929

AB An automated anal. method is provided, which comprises making a sample in a container absorbed to a probe, dispensing the sample from the probe to a sensor part equipped with a piezoelec. element for converting the mass change on the sensor into an elec. change such as a basic resonant frequency and quantitating it, performing at least once making the dispensed sample reabsorbed to the probe and re-dispensing the reabsorbed sample to the sensor part, and thereby, promoting the progress of a chemical reaction or else generated on the sensor. Also provided is an automated anal. apparatus used for this method. Diagrams describing the apparatus assembly are given.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 21 Jan 2005
ACCESSION NUMBER: 2005:59896 HCAPLUS
DOCUMENT NUMBER: 142:130365
TITLE: Viral identification by generation and detection of protein signatures
INVENTOR(S): West, Jason Andrew Appleton; Stamps, James Frederick; Shokair, Isaac Ramzy; Renzi, Ronald F.; Vandernoot, Victoria A.; Wiedenman, Boyd J.; Lane, Todd William; Fruetel, Julia Ann
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 53 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005014134	A1	20050120	US 2004-795549	20040308

PRIORITY APPLN. INFO.: US 2003-452985P P 20030306

AB The present invention provides systems and processes for the collection and identification of macromols., such as biol.-derived macromols. (e.g., proteins and nucleic acids), by measuring and

comparing the mol. weight signatures of macromol. samples. Reproducible mol. weight signatures provides reliable sample identification. In the case of viruses, proteomic mol. weight signatures can be used for identifying viral agents.

L29 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 17 Sep 2004
ACCESSION NUMBER: 2004:759704 HCAPLUS
DOCUMENT NUMBER: 141:256963
TITLE: Mass spectrometry in methods for rapid detection and identification of bioagents for environmental and product testing
INVENTOR(S): Ecker, David J.; Griffey, Richard H.; Sampath, Rangarajan; Hofstadler, Steven A.; McNeil, John; Crooke, Stanley T.; Blyn, Lawrence B.; Hall, Thomas A.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 84 pp., Cont.-in-part of U.S. Ser. No. 326,642.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 16
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004180328	A1	20040916	US 2003-660996	20030912
US 2003027135	A1	20030206	US 2001-798007	20010302
US 2003190605	A1	20031009	US 2002-326047	20021218
US 2004121314	A1	20040624	US 2002-326642	20021218
US 2004110169	A1	20040610	US 2003-430253	20030506
WO 2004053076	A2	20040624	WO 2003-US38757	20031205
WO 2004053076	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003297997	A1	20040630	AU 2003-297997	20031205
US 2004185438	A1	20040923	US 2004-796867	20040309
WO 2005024046	A2	20050317	WO 2004-US7236	20040310
WO 2005024046	A3	20060504		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,				

RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2006121520	A1	20060608	US 2006-331987	20060113
PRIORITY APPLN. INFO.:			US 2001-798007	A2 20010302
			US 2002-431319P	P 20021206
			US 2002-323186	A2 20021218
			US 2002-326047	A2 20021218
			US 2002-326642	A2 20021218
			US 2003-443788P	P 20030130
			US 2003-453607P	P 20030310
			US 2003-454165P	P 20030312
			US 2002-156608	A1 20020524
			US 2003-660996	A 20030912
			WO 2003-US38757	W 20031205
			US 2004-71100	A 20040309

AB The present invention provides methods for rapid detection of bioagents for environmental and product testing. The methods can be used for testing air, water, soil, surfaces of buildings, containers, towers and the like, as well as testing of foodstuff and cosmetics. Water and air samples were prepared and analyzed by ESI-FTICR mass spectrometry and FT-ICR MS, resp. Anal. of the mol. masses enabled detection and identification of the Bacillus anthracis spores or Bacillus thuringiensis israelensis (Bti) spores.

L29 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 23 Aug 2004
ACCESSION NUMBER: 2004:685002 HCAPLUS
DOCUMENT NUMBER: 142:161737
TITLE: Characterization of particulate proteins in Pacific surface waters
AUTHOR(S): Saijo, Sachiko; Tanoue, Eiichiro
CORPORATE SOURCE: Department of Earth and Environment Sciences, Graduate School of Environmental Studies, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, 464-8601, Japan
SOURCE: Limnology and Oceanography (2004), 49(4), 953-963
CODEN: LIOCAH; ISSN: 0024-3590
PUBLISHER: American Society of Limnology and Oceanography
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Mol. characteristics of particulate proteins were assessed in Pacific surface water using 2-dimensional electrophoresis (2DE). Most proteinaceous materials estimated by dye-binding methods were characterized by 2DE as unresolved acidic matter with a broad range of mol. mass and 2DE unresolved low mol. mass matter with a broad range of isoelec. points. 2DE unresolved acidic and low mol. mass matter was considered to contain peptides conjugated with acidic saccharides and protein degradation (peptides) products, resp., which indicated almost

all proteins in living organisms failed to survive in detrital particulate organic matter (POM). Nevertheless, 23 discrete proteins were distinguished by 2DE. Electrophoretic patterns of discrete proteins indicated they were a component of detrital POM. Three discrete proteins were subjected to N terminal amino acid sequence anal. Two of these 3 could not be determined because their N termini were blocked; 1 protein was determined from the N terminus to the ninth amino acid residue. A homol. search showed the N terminal amino acid sequence of this protein agreed completely with that of 70 kDa heat shock protein (HSP70) derived from photosynthetic organisms. HSP70 is a major member of the mol. chaperones which protect or repair proteins from damage under environmental stress conditions. The occurrence of HSP70 in this study demonstrated phytoplankton can induce mol. chaperone(s). Clarification of factor(s) controlling chaperone induction will enable an assessment of the actual environmental stress on phytoplankton at a biomol. level.

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 19 May 2004
ACCESSION NUMBER: 2004:405703 HCAPLUS
DOCUMENT NUMBER: 140:402850
TITLE: Index for identifying biomolecules by mass spectrometry using a physico-chemical property other than mass
INVENTOR(S): Geromanos, Scott; Dongre, Ashok; Opiteck, Gregory; Silva, Jeffrey
PATENT ASSIGNEE(S): Micromass UK Limited, UK
SOURCE: Brit. UK Pat. Appl., 118 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2395271	A1	20040519	GB 2003-21898	20021209
GB 2395271	B2	20050316		
GB 2385918	A1	20030903	GB 2002-28653	20021209
GB 2385918	B2	20040526		
GB 2394545	A1	20040428	GB 2003-21900	20021209
GB 2394545	B2	20050316		
GB 2396914	A1	20040707	GB 2003-30041	20021209
GB 2396914	B2	20050622		
EP 1469313	A1	20041020	EP 2004-14462	20021209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				
EP 1469314	A1	20041020	EP 2004-14463	20021209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				
EP 1469315	A1	20041020	EP 2004-14464	20021209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				
GB 2408574	A1	20050601	GB 2005-4684	20021209
GB 2408574	B2	20060104		
EP 1647825	A2	20060419	EP 2005-26685	20021209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				

PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.:	US 2001-340460P	P 20011208
	US 2002-364847P	P 20020314
	GB 2002-28653	A3 20021209
	EP 2002-783317	A3 20021209
	GB 2003-30041	A3 20021209

AB The index for use in identifying biomols. by mass spectrometry is obtained by (a) accurately determining the masses or mass to charge ratios of mols. of biol. origin; (b) determining a first physico-chemical property other than mass or mass to charge ratio of said mols. of biol. origin. The mols. may be peptides or proteins. The physico-chemical property may be elution time, solubility, antibody affinity, ionization potential, electrophoretic mobility etc. Exemplary anal. of a single protein (BSA), a 14-peptide mixture, a bacterial (Escherichia coli) proteome, and rat dose/response metabolism for a drug candidate is presented.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 21 Nov 2003
ACCESSION NUMBER: 2003:913393 HCAPLUS
DOCUMENT NUMBER: 139:393103
TITLE: Polyelectrolyte complex (e.g. zwitterionic polythiophenes) with a receptor (e.g. polynucleotide, antibody etc.) for biosensor applications
INVENTOR(S): Inganaes, Olle; Asberg, Peter; Nilsson, Peter
PATENT ASSIGNEE(S): Swed.
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003096016	A1	20031120	WO 2003-SE762	20030509
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003230536	A1	20031111	AU 2003-230536	20030509
CA 2487947	AA	20031120	CA 2003-2487947	20030509
EP 1504263	A1	20050209	EP 2003-723613	20030509
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

JP 2005525554	T2	20050825	JP 2004-503956		20030509
US 2006175193	A1	20060810	US 2006-514191		20060213
PRIORITY APPLN. INFO.:			SE 2002-1468	A	20020513
			WO 2003-SE762	W	20030509

AB The invention relates to a complex between a conjugated polyelectrolyte, and one or more receptor mols. specific for a target biomol. analyte, said polyelectrolyte and said receptor being non-covalently bound to each other, usable as a probe for biomol. interactions. It also relates to a method of determining selected properties of biomols. Thereby, a complex as above is exposed to a target biomol. analyte whereby the analyte and the receptor interact, and a change of a property of said polyelectrolyte in response to the interaction between the receptor and the analyte is detected. The detected change is used to determine said selected property of said biomol. A zwitterionic polythiophene derivative, poly(3-[(S)-5-amino-5-carboxyl-3-oxapentyl]-2,5-thiophenylene hydrochloride) (POWT), was mixed with a 20-mer DNA and used in fluorescent detection of single nucleotide polymorphism.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 19 Sep 2003
ACCESSION NUMBER: 2003:737267 HCAPLUS
DOCUMENT NUMBER: 139:242530
TITLE: Method and apparatus for the identification and quantification of biomolecules
INVENTOR(S): Nadler, Timothy K.; Parker, Kenneth G.; Vella, George J.; Wagenfeld, Barrie G.; Huang, Yulin; Lotti, Robert J.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 29 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2003175844	A1	20030918	US 2002-327342		20021220
WO 2003078452	A1	20030925	WO 2003-US6615		20030304
W: JP					
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR					
EP 1490394	A1	20041229	EP 2003-713891		20030304
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK					
JP 2005534284	T2	20051117	JP 2003-576456		20030304
PRIORITY APPLN. INFO.:			US 2002-363663P	P	20020312
			US 2002-327342	A	20021220
			WO 2003-US6615	W	20030304

AB Polypeptides, for example those separated on a gel, are electroblotted through a digestion membrane to a composite capture membrane that can

be directly analyzed using mass spectrometry. The mol. wts. of the fragments generated by the digestion membrane are then used to identify the polypeptide from which they originated. The digestion membrane contains an immobilized protease such as trypsin, which cleaves the electroblotted proteins into fragments during electroblotting with such high enzyme cleavage capacity and efficiency that one pass of the polypeptide through the membrane is sufficient. The peptide fragments are collected onto a composite capture membrane that is chemical treated, for example, by adding a mixture of nitrocellulose and MALDI matrix, so as to absorb peptides near the surface to facilitate desorption, thereby increasing the sensitivity of subsequent anal. by MALDI-TOF mass spectrometry. In one application, labeling of proteins with reagents containing combinations of stable heavy isotopes prior to electroblotting and digestion permits the relative quantification of protein expression in two or more samples in a single operation. In another application, the gel containing separated polypeptides is replaced by a tissue sample, or blot of a tissue sample. The polypeptides from the tissue sample are then electroblotted through the digestion membrane onto the capture membrane, permitting the imaging of the tissue based on the proteins identified by mass spectrometry.

L29 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 08 May 2003
ACCESSION NUMBER: 2003:348743 HCAPLUS
DOCUMENT NUMBER: 138:334069
TITLE: Automated sample processing for identification of microorganisms and proteins
INVENTOR(S): Krishnamurthy, Thaiyalnayaki
PATENT ASSIGNEE(S): United States Dept. of the Army, USA
SOURCE: U.S., 14 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 6558946	B1	20030506	US 2001-940906		20010828
PRIORITY APPLN. INFO.:			US 2000-228589P	P	20000829

AB The present invention concerns a method for rapidly identifying biol. agents in a sample suspected of containing the same. The biomarkers are released from biol. agents present in a sample, separated from contaminants present in the sample, ionized to form an ionized stream of biomarkers which are sent to a mass spectrometer to obtain a mass spectral profile of the biomarkers in the sample for anal. and identification. The present invention is also directed to an apparatus useful for carrying out the steps of the above method in an automated mode.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 01 Nov 2002
ACCESSION NUMBER: 2002:832573 HCAPLUS
DOCUMENT NUMBER: 137:358059
TITLE: Compositions and methods for inducing cancer cell

death
INVENTOR(S): Dowdy, Steven F.; Ezhevsky, Sergei A.; Wadia, Jay S.
PATENT ASSIGNEE(S): Washington University, USA
SOURCE: PCT Int. Appl., 104 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002085305	A2	20021031	WO 2002-US13092	20020424
WO 2002085305	A3	20031218		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002259005	A1	20021105	AU 2002-259005		20020424
PRIORITY APPLN. INFO.:			US 2001-286099P	P	20010424
			WO 2002-US13092	W	20020424

AB Disclosed are compns. and method for inducing cell death such as in tumor cells. Illustrative compns. are novel fusion proteins that include at least one protein transduction domain (PTD) and at least one amino acid sequence encoded by a chicken anemia virus (CAV). The invention has a wide spectrum of important applications including use as much needed "magic bullet" to kill cancer cells in vitro and in vivo.

L29 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 18 Oct 2002
ACCESSION NUMBER: 2002:793930 HCAPLUS
DOCUMENT NUMBER: 137:307015
TITLE: Method for identification of proteins from intracellular bacteria
INVENTOR(S): Shaw, Allan Christian; Vandahl, Brian Berg
PATENT ASSIGNEE(S): Den.
SOURCE: PCT Int. Appl., 179 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002082091	A2	20021017	WO 2002-DK234	20020409
WO 2002082091	A3	20040304		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,

LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI,
FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2443813	AA	20021017	CA 2002-2443813	20020409
US 2003199438	A1	20031023	US 2002-119536	20020409
BR 2002008786	A	20040309	BR 2002-8786	20020409
EP 1412757	A2	20040428	EP 2002-759766	20020409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1531653	A	20040922	CN 2002-809114	20020409
JP 2004534526	T2	20041118	JP 2002-579810	20020409
US 2005239160	A1	20051027	US 2004-996306	20041123
PRIORITY APPLN. INFO.:			DK 2001-581 A	20010409
			US 2001-282513P P	20010409
			US 2002-119536 B1	20020409
			WO 2002-DK234 W	20020409

AB The present invention relates to a novel combination of methods that enables identification of proteins secreted from intracellular bacteria regardless of the secretion pathway. The invention further provides proteins that are identified by these methods. Secreted proteins are known to be suitable candidates for inclusion in immunogenic compns. and/or diagnostic purposes. The invention also provides peptide epitopes (T-cell epitopes) from the identified secreted proteins, as well as nucleic acid compds. that encode the proteins. The invention further comprises various applications of the proteins or fragments thereof, such as pharmaceutical and diagnostic applications.

L29 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 04 Oct 2002
ACCESSION NUMBER: 2002:754696 HCAPLUS
DOCUMENT NUMBER: 137:293520
TITLE: Antibody-containing sera for identifying Pathogenic and commensal bacteria antigens as vaccines
INVENTOR(S): Robinson, Andrew; Gorringe, Andrew Richard; Hudson, Michael John; Bracegirdle, Philippa; West, David McKay; Oliver, Kerry Jane; Kroll, John Simon; Langford, Paul Richard
PATENT ASSIGNEE(S): Microbiological Research Authority, UK; Imperial College Innovations Limited
SOURCE: PCT Int. Appl., 310 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002077648	A2	20021003	WO 2002-GB1399	20020322
WO 2002077648	A3	20031231		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2441551	AA	20021003	CA 2002-2441551	20020322
EP 1401865	A2	20040331	EP 2002-706996	20020322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004534524	T2	20041118	JP 2002-575648	20020322
US 2004265328	A1	20041230	US 2004-472260	20040726
PRIORITY APPLN. INFO.:			GB 2001-7219 A	20010322
			WO 2002-GB1399 W	20020322

AB The invention provides methods of screening commensal and pathogenic bacteria for previously unidentified vaccine antigens, based upon identifying polypeptide antigens that bind to sera raised against commensal bacterial proteins. Also provided are vaccine compns. and methods of preparing vaccine compns. comprising the antigens identified by the screening methods. Antigens and uses thereof are also described.

L29 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 18 Jan 2002
ACCESSION NUMBER: 2002:51331 HCAPLUS
DOCUMENT NUMBER: 136:98852
TITLE: Methods of study for protein patterning and cell adhesion properties
INVENTOR(S): Chen, Christopher S.; Tien, Joe Y.; Tan, John; Bhatia, Sangeeta N.; Jastromb, William E.
PATENT ASSIGNEE(S): The Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004113	A2	20020117	WO 2001-US41344	20010711
WO 2002004113	A3	20030123		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002182633	A1	20021205	US 2001-904200	20010711

PRIORITY APPLN. INFO.: US 2000-217464P P 20000711

AB The invention concerns a method of adhering a biomol. to a substrate, comprising treating the substrate with a surfactant compound and a biomol. More particularly, the invention relates to a method of adhering a biomol. to a substrate wherein the surfactant compound is not covalently linked to the substrate. The invention also relates to a device for adhering a biomol. in a predetd. position comprising: a substrate having thereon a plurality of cytophilic regions that can adhere a biomol. on the substrate by cytophobic regions to which the biomols. do not adhere contiguous with the cytophilic regions, wherein the cytophobic regions comprise one or more surfactant compds. Diagrams describing the methodol. are given.

L29 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ED Entered STN: 20 May 2001
ACCESSION NUMBER: 2001:362898 HCAPLUS
DOCUMENT NUMBER: 136:66555
TITLE: Expression cloning to identify monomeric GTP-binding proteins by GTP overlay.
AUTHOR(S): Andres, Douglas A.
CORPORATE SOURCE: USA
SOURCE: Methods in Enzymology (2001), 332(Regulators and Effectors of Small GTPases, Part F), 203-210
CODEN: MENZAU; ISSN: 0076-6879
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An expression cloning method for identifying low mol. weight GTP-binding proteins from bacterial expression libraries was used to screen human retinal and mouse embryo cDNA expression libraries. Small GTP-binding proteins were easily detected through ligand blotting after separation by SDS-PAGE and transfer to nitrocellulose filters. Bacterial colonies from areas of the master plates were recovered and rescreened by dilution cloning. The method relied solely on guanine nucleotide-binding specificity. Thus, it may allow the isolation of cDNAs encoding novel Ras-related GTP-binding proteins from plants and other organisms. (c) 2001 Academic Press.
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, PHIC, PHIN, TOXCENTER, PASCAL, DISSABS' ENTERED AT 14:59:44 ON 21 SEP 2006)
L30 0 S L28

FILE 'MEDLINE' ENTERED AT 14:59:58 ON 21 SEP 2006

FILE LAST UPDATED: 20 Sep 2006 (20060920/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L31 137 SEA FILE=MEDLINE ABB=ON PLU=ON ("ELECTROPHORESIS, POLYACRYLAMIDE GEL" AND "NEISSERIA MENINGITIDIS")/CT
L32 3 SEA FILE=MEDLINE ABB=ON PLU=ON L31 AND (PROTEINS OR POLYPROTEINS OR PEPTIDES)/CT

L32 ANSWER 1 OF 3 MEDLINE on STN
ACCESSION NUMBER: 85107086 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6440950
TITLE: A study by high-resolution two-dimensional polyacrylamide gel electrophoresis of relationships between Neisseria gonorrhoeae and other bacteria.
AUTHOR: Jackson P; Thornley M J; Thompson R J
SOURCE: Journal of general microbiology, (1984 Dec) Vol. 130, No. 12, pp. 3189-201.
Journal code: 0375371. ISSN: 0022-1287.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198503
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 20 Mar 1990
Entered Medline: 14 Mar 1985
ED Entered STN: 20 Mar 1990
Last Updated on STN: 20 Mar 1990
Entered Medline: 14 Mar 1985
AB High-resolution two-dimensional polyacrylamide gel electrophoresis was used to analyse the soluble proteins from seven strains of Neisseria gonorrhoeae, six strains of Neisseria meningitidis and one or two strains of twelve other species. Approximately 200 individual polypeptides could be visualized as Coomassie Blue stained spots on an electrophoretogram of N. gonorrhoeae and similar numbers were found for the other bacteria. Each species of bacterium had a distinctly different pattern of spots which could be recognized. Quantitative comparisons of 48 selected spots derived from one strain of N. gonorrhoeae with those of five other strains of gonococcus, three strains of N. meningitidis and one of Branhamella catarrhalis, showed relationships in agreement with their current taxonomic classification but with a higher level of discrimination than that of previously used methods. It was also possible to distinguish the individual gonococcal strains. It is suggested that the method could be useful for bacterial classification and identification.

L32 ANSWER 2 OF 3 MEDLINE on STN
ACCESSION NUMBER: 81018041 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6774531
TITLE: [Immunochemical study of meningococcal proteins]. Immunokhimicheskoe izuchenie belkov meningokokkov.
AUTHOR: Filippov Iu V; Efimov D D; Belova T N; Zvenigorodskaia V P
SOURCE: Zhurnal mikrobiologii, epidemiologii, i immunobiologii,

(1980 May) No. 5, pp. 77-82.
Journal code: 0415217. ISSN: 0372-9311.
PUB. COUNTRY: USSR
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Russian
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198011
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 16 Mar 1990
Entered Medline: 25 Nov 1980
ED Entered STN: 16 Mar 1990
Last Updated on STN: 16 Mar 1990
Entered Medline: 25 Nov 1980
AB The peptide composition and the molecular weight of peptides were determined in meningococci of serogroup A (7 strains), serogroup B (7 strains; of these, 4 strains belonged to serotype 2), serogroup C (4 strains) and serogroups D, X. Y and Z (1 strain each) by means of electrophoresis in polyacrylamide gel with sodium dodecyl sulfate. All serogroup A strains were found to contain 2 main peptides with molecular weights of 39,000 and 45,000 daltons; molecular weights of peptides in other serogroups varied in different strains. In group B and C meningococci, besides the reference strains of serotype 2, 4 more strains with peptide characteristics allowing to consider these strains belonging to serotype 2 were detected. The serotype-specific high-molecular protein preparation, purified to a considerable extent from lipopolysaccharide and hydrocarbons, was obtained from serogroup B strain, serotype 2. This preparation, when used for the immunization of rabbits, induced the formation of serotype-specific antibodies. The high-molecular protein preparation, serotype 2, was found to contain 5 individual antigenic components.

L32 ANSWER 3 OF 3 MEDLINE on STN
ACCESSION NUMBER: 80115495 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6766438
TITLE: Chemical analysis of major outer membrane proteins of Neisseria meningitidis: comparison of serotypes 2 and 11.
AUTHOR: Tsai C M; Frasch C E
SOURCE: Journal of bacteriology, (1980 Jan) Vol. 141, No. 1, pp. 169-76.
Journal code: 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198004
ENTRY DATE: Entered STN: 15 Mar 1990
Last Updated on STN: 15 Mar 1990
Entered Medline: 17 Apr 1980
ED Entered STN: 15 Mar 1990
Last Updated on STN: 15 Mar 1990
Entered Medline: 17 Apr 1980

(FILE 'HCAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, PHIC, PHIN, TOXCENTER, PASCAL, DISSABS' ENTERED AT 15:01:00 ON 21 SEP 2006)
L33 21674 S ("JACKSON W"? OR "JACKSON J"?)/AU
L34 14253 S "HARRIS A"?/AU
L35 41 S L33 AND L34
L36 2 S (L33 OR L34 OR L35) AND (L6 OR L20 OR L27)

- Author(s)

L37 2 DUP REM L36 (0 DUPLICATES REMOVED)

L37 ANSWER 1 OF 2 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-256581 [22] WPIDS
CROSS REFERENCE: 2000-237782 [20]
DOC. NO. CPI: C2000-078252
TITLE: Neisseria **meningitidis** NMASP **polypeptide**, nucleotide sequences and antibodies, useful in vaccines against infection.
DERWENT CLASS: B04 D16
INVENTOR(S): **HARRIS, A M; JACKSON, W J**
PATENT ASSIGNEE(S): (ANTE-N) ANTEX BIOLOGICS INC
COUNTRY COUNT: 86
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000012535	A2	20000309	(200022)*	EN	75
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 9957894	A	20000321	(200031)		
EP 1109454	A2	20010627	(200137)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2002523077	W	20020730	(200264)		98

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000012535	A2	WO 1999-US19663	19990901
AU 9957894	A	AU 1999-57894	19990901
EP 1109454	A2	EP 1999-945257	19990901
		WO 1999-US19663	19990901
JP 2002523077	W	WO 1999-US19663	19990901
		JP 2000-567554	19990901

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9957894	A	Based on	WO 2000012535
EP 1109454	A2	Based on	WO 2000012535
JP 2002523077	W	Based on	WO 2000012535

PRIORITY APPLN. INFO: US 1998-98685P 19980901
AN 2000-256581 [22] WPIDS
CR 2000-237782 [20]
AB WO 200012535 A UPAB: 20021105
NOVELTY - An isolated Neisseria **meningitidis** NMASP **polypeptide**, which has a **molecular weight** of about 40-55 kD, determined by **sodium dodecyl** sulfate (**SDS**)-**PAGE** (**polyacrylamide gel electrophoresis**), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a **peptide** fragment of NMASP;
(2) an isolated antibody that specifically binds NMASP;
(3) an antigenic composition, vaccine or pharmaceutical composition comprising NMASP or a **peptide** fragment or an antibody of (2);
(4) an isolated DNA comprising a nucleotide sequence encoding NMASP or its fragments;
(5) an isolated DNA sequence having a 153 base pair (bp) sequence given in the specification;
(6) an isolated DNA which comprises a nucleotide sequence that hybridizes under high stringency conditions to a sequence of (5);
(7) plasmid pNmAH116 obtainable from Escherichia coli Top10 pNmAH116) as deposited with the ATCC and assigned accession number 98839;
(8) a method (A) for assaying for an agent that interacts with NMASP;
(9) an antagonist which inhibits the activity or expression of NMASP; and
(10) a method for identifying compounds which interact with and inhibitor or activate an activity of NMASP, comprising contacting the **polypeptide** with the compound to be screened under interaction conditions and assessing the interaction, an interaction being associated with a second component capable of providing a signal in the presence or absence of a signal generated by the interaction between the **polypeptide** and the compound.

ACTIVITY - Antibacterial; Anti-inflammatory.

MECHANISM OF ACTION - Vaccine.

USE - NMASP can be used in a method to produce an immune response in an animal. The sequences and antibodies are useful for protection against N. **meningitidis**, the most common cause of bacterial **meningitidis** and septicemia in infants and young adults. The antibody is a cytotoxic antibody that mediates complement killing of N. **meningitidis**. NMASP and NMASP-derived **polypeptides** may be used as ligands to detect antibodies elicited in response to N. **meningitidis** infections.

ADVANTAGE - Antibody generated against the NMASP **polypeptide** in an animal host will exhibit bactericidal and/or opsonic activity against many Neisseria **meningitidis** strains and thus confer broad cross-strain protection. Bactericidal and/or opsonic antibody will prevent the bacterium from infecting the host and/or enhance the clearance of the pathogen by the host's immune system.

Dwg.0/2

L37 ANSWER 2 OF 2 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER:	2000-237782 [20] WPIDS
CROSS REFERENCE:	2000-256581 [22]
DOC. NO. NON-CPI:	N2000-178293
DOC. NO. CPI:	C2000-072442
TITLE:	Non-cytosolic NGSP **polypeptide** and polynucleotide sequence from Neisseria useful for diagnosis, prevention or treatment of Neisseria infections.
DERWENT CLASS:	B04 C06 C07 D16 S03
INVENTOR(S):	**HARRIS, A M; JACKSON, W J**
PATENT ASSIGNEE(S):	(ANTE-N) ANTEX BIOLOGICS INC; (HARR-I) HARRIS A M; (JACK-I) JACKSON W J
COUNTRY COUNT:	87
PATENT INFORMATION:	

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000012133	A1	20000309	(200020)*	EN	68
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 9959066	A	20000321	(200031)		
EP 1117436	A1	20010725	(200143)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
ZA 2001001755	A	20011128	(200202)		75
US 2002018782	A1	20020214	(200214)		
US 6693186	B2	20040217	(200413)		
US 6756493	B1	20040629	(200443)		
MX 2001002327	A1	20030901	(200465)		
US 2004191267	A1	20040930	(200465)		
US 2004229339	A1	20041118	(200477)		
US 2005136422	A1	20050623	(200542)		
MX 227163	B	20050404	(200571)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 2000012133	A1		WO 1999-US20070	19990901
AU 9959066	A		AU 1999-59066	19990901
EP 1117436	A1		EP 1999-946719	19990901
			WO 1999-US20070	19990901
ZA 2001001755	A		ZA 2001-1755	20010301
US 2002018782	A1	Provisional	US 1998-98685P	19980901
			US 1999-388089	19990831
US 6693186	B2	Provisional	US 1998-98685P	19980901
			US 1999-388089	19990831
US 6756493	B1	Provisional	US 1998-98685P	19980901
			US 1999-388090	19990831
MX 2001002327	A1		WO 1999-US20070	19990901
			MX 2001-2327	20010301
US 2004191267	A1	Provisional Div ex	US 1998-98685P	19980901
			US 1999-388090	19990831
			US 2004-840530	20040506
US 2004229339	A1	Provisional Div ex	US 1998-98685P	19980901
			US 1999-388089	19990831
			US 2003-749143	20031229
US 2005136422	A1	Provisional Div ex	US 1998-98685P	19980901
			US 1999-388090	19990831
			US 2004-840533	20040506
MX 227163	B		WO 1999-US20070	19990901
			MX 2001-2327	20010301

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9959066	A	Based on	WO 2000012133
EP 1117436	A1	Based on	WO 2000012133
MX 2001002327	A1	Based on	WO 2000012133
US 2004191267	A1	Div ex	US 6756493

US 2004229339 A1 Div ex US 6693186
US 2005136422 A1 Div ex US 6756493
MX 227163 B Based on WO 2000012133

PRIORITY APPLN. INFO: US 1998-98685P 19980901; US
1999-388089 19990831; US
1999-388090 19990831; US
2004-840530 20040506; US
2003-749143 20031229; US
2004-840533 20040506

AN 2000-237782 [20] WPIDS
CR 2000-256581 [22]
AB WO 200012133 A UPAB: 20051104
NOVELTY - Isolated NGSP **polypeptide** (I) of Neisseria spp. but not from N. **meningitidis** has a **molecular weight** of 40-55 kD determined by **sodium dodecyl** sulfate **polyacrylamide gel electrophoresis** (**SDS-PAGE**). The NGSP **polypeptide** is the whole, or a subunit of a non-cytosolic **protein** embedded in or located in the bacterial envelope which includes the inner membrane, outer surface and periplasmic space.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a **peptide** fragment (II) of (I);

(2) an antibody (III) that specifically binds (I) or a fragment of (I);

(3) an antigenic, pharmaceutical or vaccine composition comprising (I) or (II) and a carrier or diluent;

(4) a pharmaceutical composition comprising (III);

(5) an isolated DNA (IV) comprising a nucleotide sequence encoding (I), (II) or a fragment of these which has the defined sequence of 153, 1242, 1395, 69 or 46 base pairs given in the specification;

(6) an isolated DNA comprising a nucleotide sequence which hybridizes under high stringency conditions to (IV) or its complement;

(7) plasmid pTLZ-NgHtrA number 2 obtainable from Escherichia coli JM109 (pTLZ-NgHtrA number 2) (ATCC PTA-470);

(8) an antagonist which inhibits the activity or expression of (I);

(9) a method for identifying compounds which interact with, inhibit or activate an activity of (I) comprising contacting a composition comprising (I) with the candidate compound (A) to permit interaction between (A) and (I); (A) is associated with a second component capable of providing a detectable signal in response to interaction of (I) with (A) so that the presence or absence of a signal generated from the interaction is determined; and

(10) a method for assaying for an agent that interacts with (I) which can be used as a diagnostic, prophylactic or therapeutic agent against Neisseria infection comprising:

(i) contacting a cell expressing (I) with an agent labeled with a detectable marker for a sufficient length of time to allow interaction;

(ii) washing the cells; and

(iii) detecting any marker associated with the cells indicating that the agent interacts with (I).

ACTIVITY - Antibacterial.

No biological data given.

MECHANISM OF ACTION - Vaccine.

(I) has conserved Arg-Gly-Asp and Arg-Gly-Asn groups near the C-terminus which function as adherence domains for extracellular

matrix **proteins.** Using (I) as a vaccine produces antibodies which inhibit (I) binding to the host's cellular matrix reducing attachment and/or subsequent invasion.

USE - (I) and (II) can be used to immunize an animal and produce an immune response (claimed). (I) and (II) can be used as ligands to detect antibodies elicited in response to Neisseria infections and also as antigens or immunogens for inducing Neisseria-specific antibodies which are useful in immunoassays to detect Neisseria in biological specimens. (IV) can be used as probes to identify Neisseria in biological specimens by hybridization or polymerase chain reaction amplification. (I) can also be used in screening assays to identify agents and compounds which useful as diagnostic, prophylactic or therapeutic agents against Neisseria infection (claimed).
Dwg.0/2

FILE 'HOME' ENTERED AT 15:03:47 ON 21 SEP 2006

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=> d his ful

     (FILE 'HCAPLUS' ENTERED AT 14:28:38 ON 21 SEP 2006)
               DEL HIS Y
L1         64938 SEA ABB=ON  PLU=ON  ((NA OR SODIUM)(W)DODECYL OR SDS)(5W)(P
               AGE OR (POLYACRYL? OR POLY ACRYL?)(3W)ELECTROPHOR?)
L2        105556 SEA ABB=ON  PLU=ON  GEL ELECTROPHOR?
L3        147559 SEA ABB=ON  PLU=ON  L1 OR L2
L4           221 SEA ABB=ON  PLU=ON  L3 AND (MENINGOCOCC? OR MENINGITID?)
L5           130 SEA ABB=ON  PLU=ON  L4 AND (PROTEIN OR POLYPROTEIN OR
               POLYPEPTIDE OR PEPTIDE)
L6            34 SEA ABB=ON  PLU=ON  L5 AND (MW OR (M OR MOL OR MOLECUL?)(W)
               (W OR WT OR WEIGH?))
L7            12 SEA ABB=ON  PLU=ON  L6 AND (ISOL? OR RECOVER?)
L8            18 SEA ABB=ON  PLU=ON  L5 AND (?KILOD? OR KD OR KDA? OR ?KDA
               OR ?KILO)
L9             1 SEA ABB=ON  PLU=ON  L5 AND (40KD? OR 41KD? OR 42KD? OR
               43KD? OR 44KD? OR 45KD? OR 46KD? OR 47KD? OR 48KD? OR
               49KD? OR 50KD? OR 51KD? OR 52KD? OR 53KD?)
L10            0 SEA ABB=ON  PLU=ON  L5 AND (40KILOD? OR 41KILOD? OR
               42KILOD? OR 43KILOD? OR 44KILOD? OR 45KILOD? OR 46KILOD?
               OR 47KILOD? OR 48KILOD? OR 49KILOD? OR 50KILOD? OR
               51KILOD? OR 52KILOD? OR 53KILOD?)
L11           28 SEA ABB=ON  PLU=ON  L7 OR L8 OR L9
               D QUE L7
               D QUE L8
               D QUE L9
               D QUE L10
               D L11 1-28 .BEVERLY

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, PHIC, PHIN,
     TOXCENTER, PASCAL, DISSABS' ENTERED AT 14:45:13 ON 21 SEP 2006
L12           49 SEA ABB=ON  PLU=ON  L7
L13           76 SEA ABB=ON  PLU=ON  L5 AND (?KILOD? OR KD OR KDA? OR
               ?KILO(W)(DA OR DALTON))
L14            2 SEA ABB=ON  PLU=ON  L9
L15            0 SEA ABB=ON  PLU=ON  L10
L16           23 SEA ABB=ON  PLU=ON  L13 AND (MW OR (M OR MOL OR MOLECUL?)(W
               )(W OR WT OR WEIGH?))
L17           58 SEA ABB=ON  PLU=ON  L12 OR L14 OR L16
L18           39 DUP REM L17 (19 DUPLICATES REMOVED)
               D 1-39 IBIB ABS

     FILE 'HCAPLUS' ENTERED AT 14:54:54 ON 21 SEP 2006
L19         1779 SEA ABB=ON  PLU=ON  (PROTEIN OR POLYPROTEIN OR POLYPEPTIDE
               OR PEPTIDE)(S)(MENINGITID? OR MENINGOCOCC?)
L20           56 SEA ABB=ON  PLU=ON  L3(L)L19
L21           16 SEA ABB=ON  PLU=ON  L20(L)(ISOL? OR RECOVER?)
               D QUE
L22           12 SEA ABB=ON  PLU=ON  L21 NOT L11
               D 1-12 .BEVERLY

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, PHIC, PHIN,
     TOXCENTER, PASCAL, DISSABS' ENTERED AT 14:56:20 ON 21 SEP 2006
L23           68 SEA ABB=ON  PLU=ON  L21
L24           53 SEA ABB=ON  PLU=ON  L23 NOT L17
L25           25 DUP REM L24 (28 DUPLICATES REMOVED)
               D 1-25 IBIB ABS

     FILE 'HCAPLUS' ENTERED AT 14:58:02 ON 21 SEP 2006
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L26          622 SEA ABB=ON  PLU=ON  ("GEL ELECTROPHORESIS"+ALL AND
                 "NEISSERIA MENINGITIDIS"+ALL)/CT
L27          228 SEA ABB=ON  PLU=ON  L26 AND PROTEINS/CT
L28           14 SEA ABB=ON  PLU=ON  L27 AND "MOLECULAR WEIGHT"+ALL/CT
L29           14 SEA ABB=ON  PLU=ON  L28 NOT (L11 OR L21)
                 D QUE L28
                 D L29 1-14 .BEVERLY

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, PHIC, PHIN,
     TOXCENTER, PASCAL, DISSABS' ENTERED AT 14:59:44 ON 21 SEP 2006
L30            0 SEA ABB=ON  PLU=ON  L28

     FILE 'MEDLINE' ENTERED AT 14:59:58 ON 21 SEP 2006
L31          137 SEA ABB=ON  PLU=ON  ("ELECTROPHORESIS, POLYACRYLAMIDE GEL"
                 AND "NEISSERIA MENINGITIDIS")/CT
L32            3 SEA ABB=ON  PLU=ON  L31 AND (PROTEINS OR POLYPROTEINS OR
                 PEPTIDES)/CT
                 D QUE
                 D 1-3 .BEVERLYMED

     FILE 'HCAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO,
     PHIC, PHIN, TOXCENTER, PASCAL, DISSABS' ENTERED AT 15:01:00 ON 21 SEP
     2006
L33        21674 SEA ABB=ON  PLU=ON  ("JACKSON W"? OR "JACKSON J"?)/AU
L34        14253 SEA ABB=ON  PLU=ON  "HARRIS A"?/AU
L35           41 SEA ABB=ON  PLU=ON  L33 AND L34
L36            2 SEA ABB=ON  PLU=ON  (L33 OR L34 OR L35) AND (L6 OR L20 OR
                 L27)
L37            2 DUP REM L36 (0 DUPLICATES REMOVED)
                 D 1-2 IBIB ABS

     FILE 'HOME' ENTERED AT 15:03:47 ON 21 SEP 2006


     FILE HCAPLUS

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     FILE COVERS 1907 - 21 Sep 2006  VOL 145 ISS 13
     FILE LAST UPDATED: 20 Sep 2006  (20060920/ED)

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      This file contains CAS Registry Numbers for easy and accurate
      substance identification.

     FILE MEDLINE
      FILE LAST UPDATED: 20 Sep 2006 (20060920/UP).  FILE COVERS 1950 TO DA

      On December 11, 2005, the 2006 MeSH terms were loaded.

      The MEDLINE reload for 2006 is now (26 Feb.) available.  For details
```

on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.ht
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 20 September 2006 (20060920/ED)

FILE EMBASE
FILE COVERS 1974 TO 21 Sep 2006 (20060921/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE WPIDS
FILE LAST UPDATED: 19 SEP 2006 <20060919/UP>
MOST RECENT DERWENT UPDATE: 200660 <200660/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html a
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 19 SEP 2006 (20060919/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE JAPIO
FILE LAST UPDATED: 3 APR 2006 <20060403/UP>
FILE COVERS APRIL 1973 TO DECEMBER 22, 2005

>>> GRAPHIC IMAGES AVAILABLE <<<

>>> NEW IPC8 DATA AND FUNCTIONALITY NOT YET AVAILABLE IN THIS FILE.
USE IPC7 FORMAT FOR SEARCHING THE IPC. WATCH THIS SPACE FOR FURTHE
DEVELOPMENTS AND SEE OUR NEWS SECTION FOR FURTHER INFORMATION
ABOUT THE IPC REFORM <<<

FILE PHIC
FILE COVERS CURRENT RECORDS AND IS UPDATED DAILY
FILE LAST UPDATED: 21 SEP 2006 (20060921/ED)

FILE PHIN
FILE COVERS 1980 TO 15 SEP 2006 (20060915/ED)

FILE TOXCENTER

FILE COVERS 1907 TO 19 Sep 2006 (20060919/ED)

This file contains CAS Registry Numbers for easy and accurate substanc
identification.

The MEDLINE file segment has been updated with 2006 MEDLINE data and
features. See HELP RLOAD for details.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2006 vocabulary.
See http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.ht
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html
for a description of changes.

FILE PASCAL
FILE LAST UPDATED: 18 SEP 2006 <20060918/UP>
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
IN THE BASIC INDEX (/BI) FIELD <<<

FILE DISSABS
FILE COVERS 1861 TO 28 AUG 2006 (20060828/ED)

FILE HOME